



PART I

Introduction to Archeology, Prehistory, and Historic Sites

My sense is that the future is this wonderfully unfolding pageant, informed completely by our own awareness of the past. You can't possibly know where you're going if you don't know where you've been.

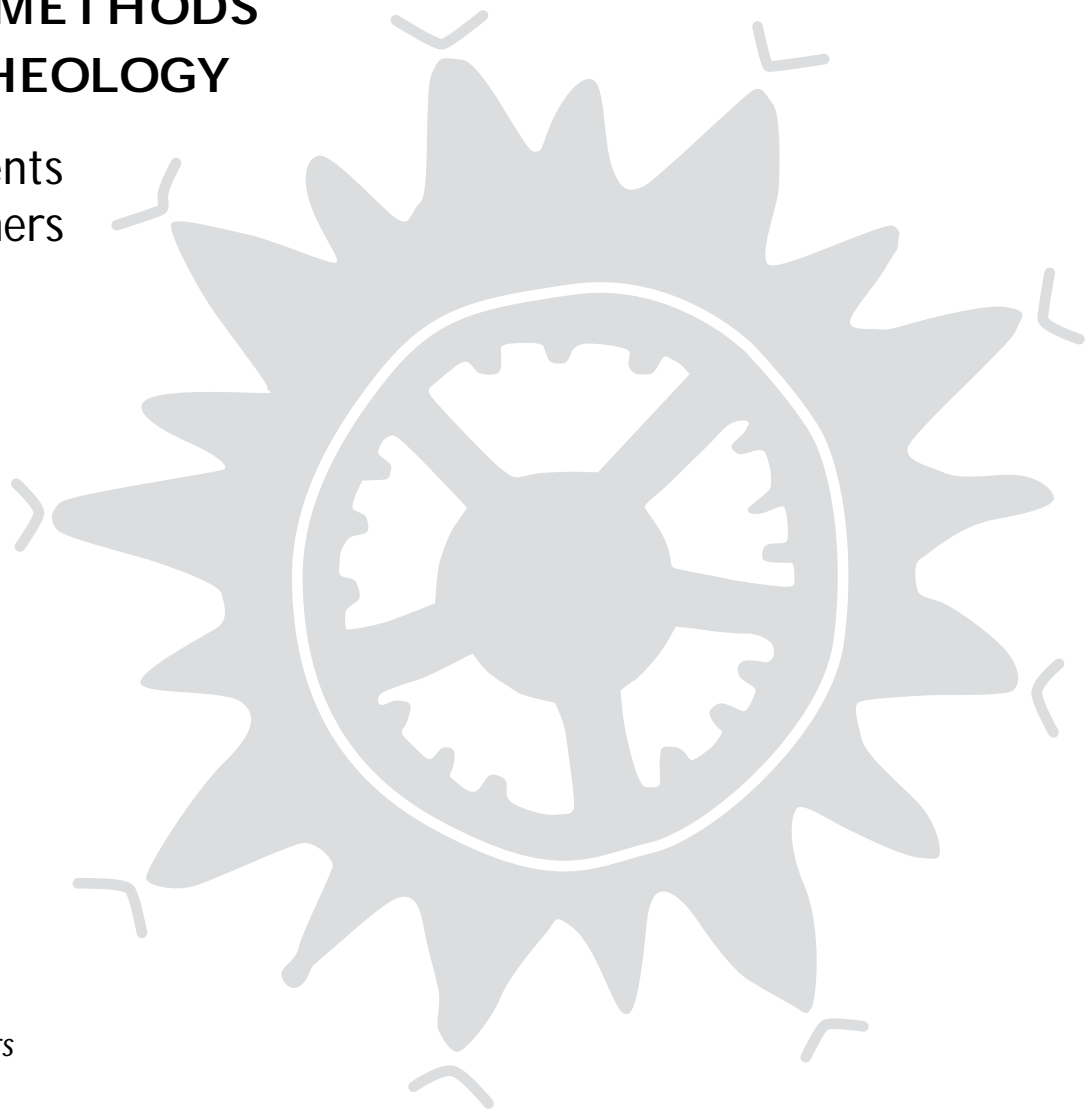
—Ken Burns, Producer
PBS Series, *The Civil War*

How Archeologists Work

An Introduction to

BASIC METHODS of ARCHEOLOGY

for Students
and Teachers



BOOKLET A

Adapted from
The Indian Years

Archeology Division
TEXAS HISTORICAL COMMISSION
Austin 1998

Preface

This section, or "booklet," on how archeologists work is intended as an introduction to the basic methods of archeology for teachers and students (primarily grades 4 through 7). Teachers may photocopy without permission any or all of this section for classroom use only. Other use of this material requires permission from: Archeology Division, Texas Historical Commission, P.O. Box 12276, Austin, TX 78711-2276.

Each booklet in Part I is assigned a letter (Booklets A, B, and C) that appears on its title page. The pages of each booklet are then numbered individually, as A-1, A-2, etc. This should help in keeping the booklets in order if they are removed from the unit for photocopying.

Because of the nature of archeology, some of the technical and cultural terms used may be new to young readers. An attempt has been made to identify all of the troublesome terms and "highlight" them in **boldface**. Definitions of terms that appear in boldface in the text are given in the Glossary at the end of Part I.

Although intended primarily for young readers, *The Indian Years* (from which this text is adapted) has been widely used as a basic introduction to the subject for both older students and adults. Teachers may therefore choose to use this material either as background material for classroom discussion or as text to be assigned for reading.

This section should serve as adequate methodological background information for classroom activities in Part II of this unit. Those who want more information should see the list of resources in Part III.

Understanding the Past



What Is Archeology?

There are many different ways to study people. The science of studying the cultural behavior and evolution of people is called **anthropology**. The special branch of anthropology that is concerned with the study of people in the past is called **archeology**.

Archeologists study past **lifeways** by **excavating** in the places where people once lived. Excavation is a very careful, measured, scientific digging process. Many different kinds of information can be gained through scientific excavation. By studying this information, the archeologist can re-create parts of the history of long-ago people.

Archeologists are detectives, scientists, and reporters. They search for clues through excavation. They study these clues scientifically in the laboratory. Then they report their findings so we can know how early people once lived. Archeologists study cultures that existed in **prehistory**—that is, in the time before written history. Archeologists also study historic cultures.

How Archeological Study Begins

Archeologists begin their study of the past by finding a **site**. A site is any place where people once lived and left behind **artifacts** or other **material remains**. These remains—such as tools, bone, or rocks used around a campfire—are clues that will help solve the mysteries of the past.

In very early sites the remains left by the culture may not be well preserved. Often stone

tools are all that remain in prehistoric sites.

Perishable artifacts made of wood or plant fibers are seldom recovered from ancient sites because the materials have long since rotted away.

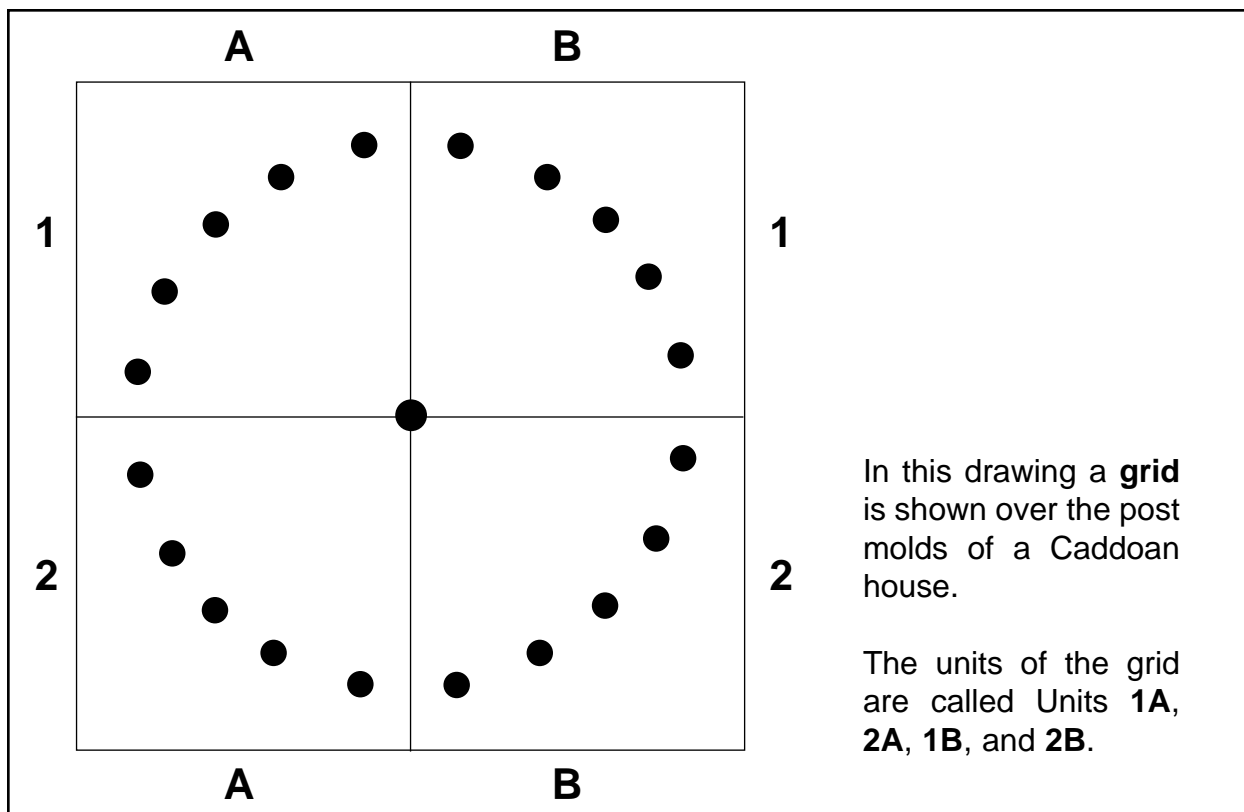
A site may be as big as a village where hundreds of people once lived for generations. Or, a site may be as small as a camp where a few hunters stopped for a short time.

The information about a newly discovered archeological site is recorded on a **site form**. Most archeologists in Texas use a standard form that is called the State of Texas Archeological Site Data Form. The form asks many questions about the site, including these:

- Who owns the site?
- Exactly where is the site located?
- How big is the site?
- What is the environment like in the site area?
- Based on visible evidence, what period does it appear to date from?
- Who recorded the site, and when?
- Has a site number been assigned?

The form also requires that the archeologist include a sketch map of the site, and a copy of a **topographic map** showing exactly where the site is located.

A copy of the site form, along with any other site notes and photographs, is then sent to an **archeological repository** for permanent curation.



*The archeologist uses wooden stakes and string to divide the site into measured units. This forms a **grid**, which helps the archeologist keep accurate records of exactly where things are found.*

How Sites Are Numbered

In most Texas repositories, site forms and other archeological records are filed by county, and by site number within the county.

In the United States a special system is used for numbering archeological sites. The number tells the state, county, and the order in which the site was recorded.

Each state has its own number—the number for Texas is 41. Each county in Texas has a special abbreviation that is used in site numbers. The last part of the site number tells how many sites were recorded in the county before this site. A Texas site number looks like this:

41 BX 52

This number means: Texas (41), Bexar County (BX), the 52nd site recorded for Bexar County.

Site numbers make it easy to keep records of sites. Many sites are also given names. Some

have interesting names like Bonfire Shelter, Devil's Cave, or Black Hopper Site. Naming a site can be more fun than giving it a number, but the number is more important to the scientist.

Archeological Excavation

Once a site has been located, it can be studied in a way that will tell us about the people who used it. The most complete way to study a buried site is through scientific excavation. First the location of the site is carefully studied and photographed by the archeologist. Then surveyor's instruments are used to make an accurate map of the site. In the next step, the archeologist uses wooden stakes and string to divide the site into measured units. This forms a **grid**, which helps the archeologist keep accurate records of exactly where things are found. Only then is the archeologist ready to excavate.

AN IMAGINARY ARCHEOLOGICAL SITE

The science of geology teaches that the surface of the Earth is constantly being changed by two major processes: deposition and erosion. Since the end of the last Ice Age (about 12,000 years ago), the land surface of most places in North America have been changed by the deposition of soil.

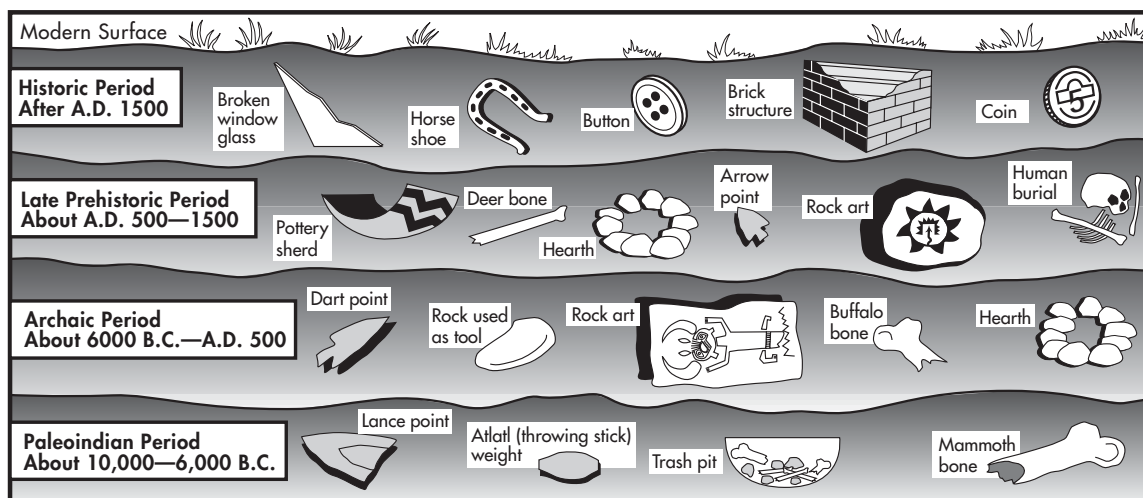
Soils have been deposited by being blown in the wind and by being carried by flooding rivers. Since the land surface has been building up because of these soil deposits, the older an archeological site is, the deeper it will be. If the same place has been used by people during different time periods, the site may be deposited in strata (or layers). In a stratified site, the older the stratum, the deeper it will be.

There are a few archeological sites in Texas where people have left cultural remains from Paleoindian times through the Historic period. In the imaginary archeological site shown here, the layers of soil contain remains

from all of the major prehistoric periods and historic times as well. A site like this can help us understand the differences between cultures in different time periods.

As you look at the layers in the imaginary archeological site, remember that some things used by early people were also used by later people. The same kinds of cultural materials may be found in strata from different periods. For example, burned rock from a **hearth**, which is shown here in the Archaic, could also be found among Late Prehistoric and Historic Indian cultural remains—or even at a modern picnic site. That is why it is so important to study artifacts in association.

Trained professionals carefully document even tiny pieces of material as they are found in a site. Each site and its remains leads to new conclusions, or supports previous conclusions, about the history of Texas.



Examples of artifacts associated with the four archeological time periods in Texas.

The archeologist digs in a grid **unit**, in carefully measured levels downward.

The archeologist is not just looking for artifacts but is studying changes in the soil and other clues in the site. Artifacts alone cannot tell us about the lifeways of past cultures. For an artifact to be part of the story of the past, we have to know exactly where it was found and what other things were found with it.

Ashes in the soil show where a fire once burned. A place where many flint flakes are found can tell where tools were made. The decayed remains of a post may show where a house once stood. If the site was occupied by different people over time, these occupations may be shown in different levels of the site.

Archeologists take **special samples** of soil to study. The soil contains pollen from plants, bits of charcoal, and other material. These are clues that help to date and identify the people who lived at the site.

Artifacts are mapped as they appear in place in each level. The dirt that is removed from each level of each unit in the grid is sifted through a wire screen. If the dirt is hard and clumpy, running water may be used to help in screening. Small objects (such as flakes of flint or beads) are trapped on the screen as the dirt falls through. The archeologist makes complete and careful notes on each level throughout the excavation.

Stone tools and other artifacts often are found where they were left long ago—but they may now be covered by several feet of dirt. Artifacts are uncovered by careful digging with a trowel and brush. A broken projectile point or a fragment of a pot is just as important as a whole artifact. Much can be learned from artifact fragments if they are excavated properly.

An artifact that is discovered in place in the ground is carefully mapped, recorded, and placed in a labeled bag. (The term **in situ** means finding an artifact in place.) The label on the bag shows the site number, when and where the object was found, and who found it. The small objects found

on the screen also are bagged and labeled according to the unit and level from which they came.

When archeologists find an artifact, they ask questions:

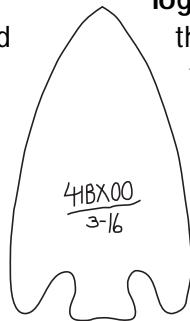
- How did this get here?
- When was it made?
- What was it made from?
- How was it made?
- How was it used?
- What objects were found with it?
- Which cultural group made it?
- Why was it discarded?

Archeologists are specially trained to search for the answers to these questions.

Writing the Report

When the excavation is finished, the artifacts, special samples, and records are taken to a laboratory. The artifacts are washed and **catalogued**. Each object is given a special number that tells exactly where it was found. Then the archeologist studies the artifacts and other clues to find out what they can tell us about the way a group of people lived hundreds, or even thousands, of years ago. The archeologist asks other scientists to help in the search to understand the people of long ago. **Geologists**, who study the history of the earth itself, have helped to study the Bering Strait land bridge and other geological changes that affected prehistoric people. **Paleontologists**, who study fossils, have helped to study the extinct animals that were killed by early hunters. **Botanists**, who study plants, have helped to identify the plants that people gathered.

Besides studying the material remains from the site, the archeologist must compare the remains to those from other, related sites. Research, analysis, and writing may take a few months to several years. The time it takes



This is a catalogued dart point. Above the line is the site number. The number 3-16 below stands for Lot 3 (in Unit 1A), specimen 16.

depends on how much of the site was excavated and how much information was found in the site.

Finally, the report is completed and published. The archeologist must then arrange for permanent **curation** of the artifacts so that other scientists will be able to use them. These other scientists may want to test the conclusions of the archeologist's report or use the artifacts for **comparative analysis**.

The Results . . .

Much of the work of archeology is routine but the results are fascinating. And the results are not merely descriptions of artifacts but of how people lived long ago. When we can at last visualize a small group of Paleoindian hunters driving a herd of giant bison over a cliff for the kill, or the women of Archaic times patiently grinding seeds into meal for food, or a Late Prehistoric Caddoan family constructing and thatching their beehive-shaped house—that is archeology.

Please join us in protecting and preserving the archeological sites that contain the clues to those vanished, long-ago lifeways.

How Archeological Sites Are Destroyed

Archeological sites are **non-renewable**. We cannot rebuild or replace them. Once a site is destroyed, the information that it contained is gone forever. We cannot put back into sites the seeds or pollen of long-ago plant foods or the bones of extinct animals. In Texas thousands of sites are damaged or destroyed each year.

When a site is scientifically excavated, it is permanently recorded and explained for all of us, even when the site is no longer there. The archeologist is preserving the history of people who left no written record.

Archeologists do not want to excavate all archeological sites in Texas. They try to save as many as possible for future generations to study and learn from. However, not all sites can be pre-

served. What causes archeological sites to be destroyed?

The Forces of Nature

Sometimes **natural forces** destroy sites. Flooding can wash away a site near a river's banks. The wearing away of soil on a hillside can scatter the remains of a site. A rock slide in a canyon might destroy a rockshelter where Archaic hunters once camped. Chemicals and water in the soil can cause objects to disintegrate. Many of the objects used by prehistoric people were not made of long-lasting pottery or stone. Archeologists call artifacts made of bone, wood, animal skins, or plant fibers perishable artifacts because they are so often destroyed by natural forces.

Sites cannot always be protected from destruction by natural causes. Archeologists try to identify important sites that are in danger. These sites are excavated if possible, since they cannot be preserved.

Human Activities

Many sites are damaged or destroyed by people simply because they do not know any better or do not care. Curious people may dig up artifacts from a site and carry them away to show to their friends. Farmers plowing fields or contractors digging foundations for new buildings may destroy sites accidentally. And, unfortunately, some people are just plain **pothunters** or commercial relic collectors. They destroy sites by digging for artifacts to sell or trade. This will be stopped only when *everyone* refuses to buy or trade artifacts.

Archeologists are trying to teach people how to protect archeological sites. Many people are concerned about preserving their heritage. As individuals, they can report to the state archeologist if they find an archeological site. They also can join archeological societies or historical organizations so they can work with others. There are

groups all across Texas that work to save archeological sites from destruction.

The population of Texas is increasing greatly every year. Cities are growing—new houses and factories are being built in what were once open fields or wooded areas. Man-made lakes are created to provide water and recreation for the growing population. Highways are built to accommodate more cars and trucks. Coal is mined and

oil wells are drilled to produce fuel for our growing energy needs. Each of these activities causes changes in the land. And anything that causes changes in the land can destroy archeological sites. Because not all sites can be protected, we must try even harder to preserve important sites that can be saved.

APPLYING YOUR KNOWLEDGE

How does a site end up underground?

How might a site be discovered?

What is the best thing to do if you find a site?
Why?

What are some other natural causes that might damage archeological sites?

Name some other activities of people that might damage archeological sites?

Name some ordinary things that you use every day. These objects are artifacts of the present.

- Which of these common objects would be *perishable* artifacts?
- Which ones would survive in an archeological site?
- Name some other things that would slowly disappear if buried in an archeological site.

A single artifact can be a critical piece of the puzzle of the past. What happens if someone picks up that puzzle piece and removes it?

Why are assigned numbers useful in keeping records? What are some other things besides archeological sites that are numbered so records can be kept? A driver's license number is one example.

Why is it important for us to learn about past cultures?



Clues to the Past

The artifacts and other remains in an archeological site are like the pieces of a jigsaw puzzle. Stone chips and arrow-points near a hearth can show us where prehistoric people once made their tools. BUT both of those pieces of the puzzle must be there, and they must be placed in the rest of the puzzle. Is this a puzzle that shows a village or an overnight campsite? Were the tool makers hunters or farmers? Each time a piece of the puzzle is removed, our picture of the past remains incomplete forever.

The Indian Years

An Introduction to

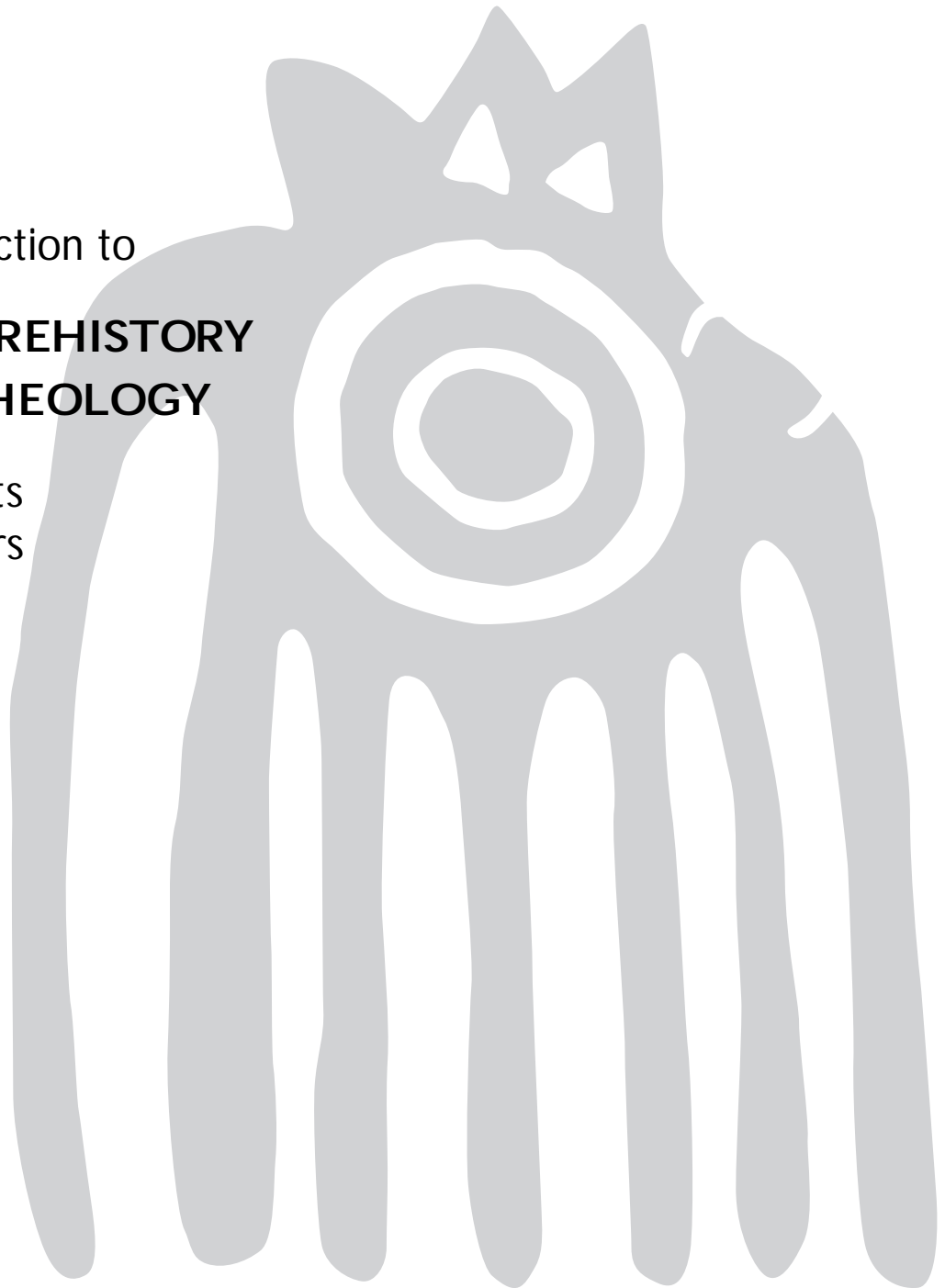
**TEXAS PREHISTORY
and ARCHEOLOGY**

for Students
and Teachers

BOOKLET B

Adapted from
The Indian Years

Archeology Divison
TEXAS HISTORICAL COMMISSION
Austin 1998



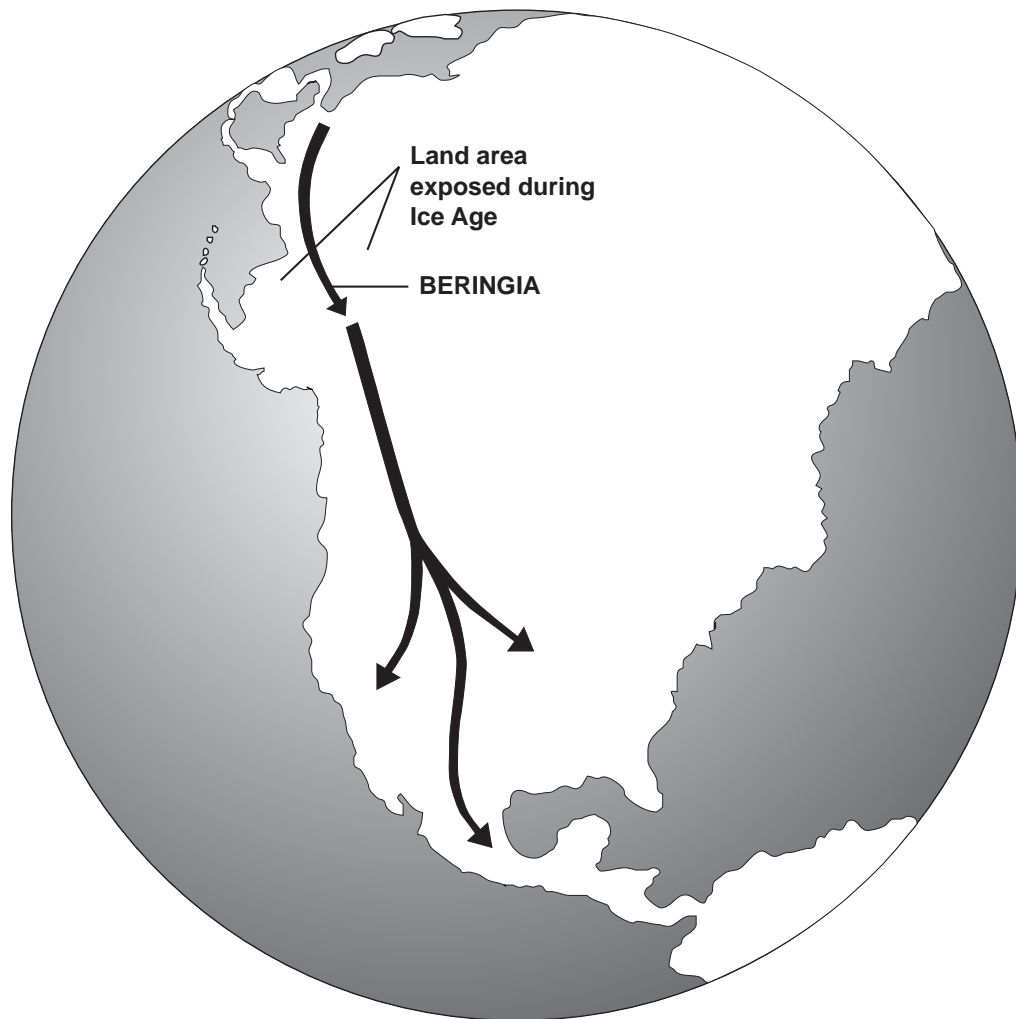
Preface

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This material should serve as background information for all of the classroom activities relating to prehistory in Part II of this unit for teachers. Those who want more information should see the list of basic books in Part III.



Paleoindian Pioneers (10,000–6,000 B.C.)

How North America Was Settled

During the last great Ice Age, much of the earth's water was frozen in huge masses of ice called glaciers. As the sea water froze, the water level of the seas lowered. About 40,000 years ago, a wide strip of land between Asia and North America appeared above sea level. This land connection between Siberia (in Asia) and Alaska (in North America) is called the Bering Strait land bridge.

On the land bridge both animals and people could cross from one continent to another.

The land bridge was so big—more than 600 miles across at its widest point—that it looked no different from the lands that it joined. The land bridge was so large that scientists have given it a name of its own, "Beringia." About 13,000 years ago, the glaciers began to melt, and the sea level rose, once again covering Beringia with sea water.

While the "bridge" existed, big-horned **bison**, shaggy mammoths, sabertooth tigers, and other animals crossed into North America. Archeologists believe that **prehistoric** people in Asia followed the herds of animals across the bridge. These long-ago hunters are called **Paleo-indians**.

Archeological Ideas about the Land Bridge

the first prehistoric people arrived in North America about 13,000 years ago, just before the land bridge disappeared under the ocean.

Some archeologists think that people may have entered North America even earlier. And some archeologists believe that not all people who came to the New World thousands of years ago came across the land bridge. These scientists think that a few people may even have arrived by boat. However, most archeologists believe that the earliest arrivals crossed the land bridge and then spread out across the New World.

Studies by other scientists also support the belief that our earliest settlers arrived from Siberia. For example, the study of **genetics** shows that American Indians are related to Asian people.

Archeologists are scientists who learn about the past by studying the remains that people have left behind.

Most of these scientists believe that



FIND

The First Americans

Paleoindians were not seeking a new land when they crossed the bridge. They were following the animals because hunting was the best way to get food. The summer was so short and the climate so cold that people could not depend on a year-round supply of food from plants.

When Paleoindians arrived in North America, they found a good supply of food in a land where no people had lived before. Because there was plenty of food, their population grew. As the population in an area grew, the supply of food would become too small to feed all of the people. Small **bands** of people were forced to move into new areas to find better hunting grounds.

Small groups of Paleoindians moved south at different times. They kept close to the animal trails, which were along paths that were free of ice. These trails led to water, protected river valleys, and mountain passes.

Not all bands followed the same paths as they moved south. Some people branched off and followed river valleys to the east. Some followed

ing Archeological Sites

Early Paleoindian tools made of stone can still be found in some places where Paleoindians hunted or camped. In Alaska and Canada, Paleoindian sites have been found along the foothills of the mountains. Scientists who have studied the locations of these sites believe that early people followed a path along these mountains and then across the continent.

Artifacts or other **cultural remains** are found in the places where early people once lived or worked. A place that contains these remains is called an **archeological site**. All that we know about prehistoric Texas has been learned from the scientific study of archeological sites.

mountain passes through the Rocky Mountains to the west. Still others continued to move south until they reached South America—more than 10,000 miles from the land bridge. And some people stopped in the place we now call Texas.

The First Texans

People first came to Texas about 12,000 years ago. These Paleoindian pioneers banded together in small groups and moved from place to place in search of food. People who move from place to place in search of food are

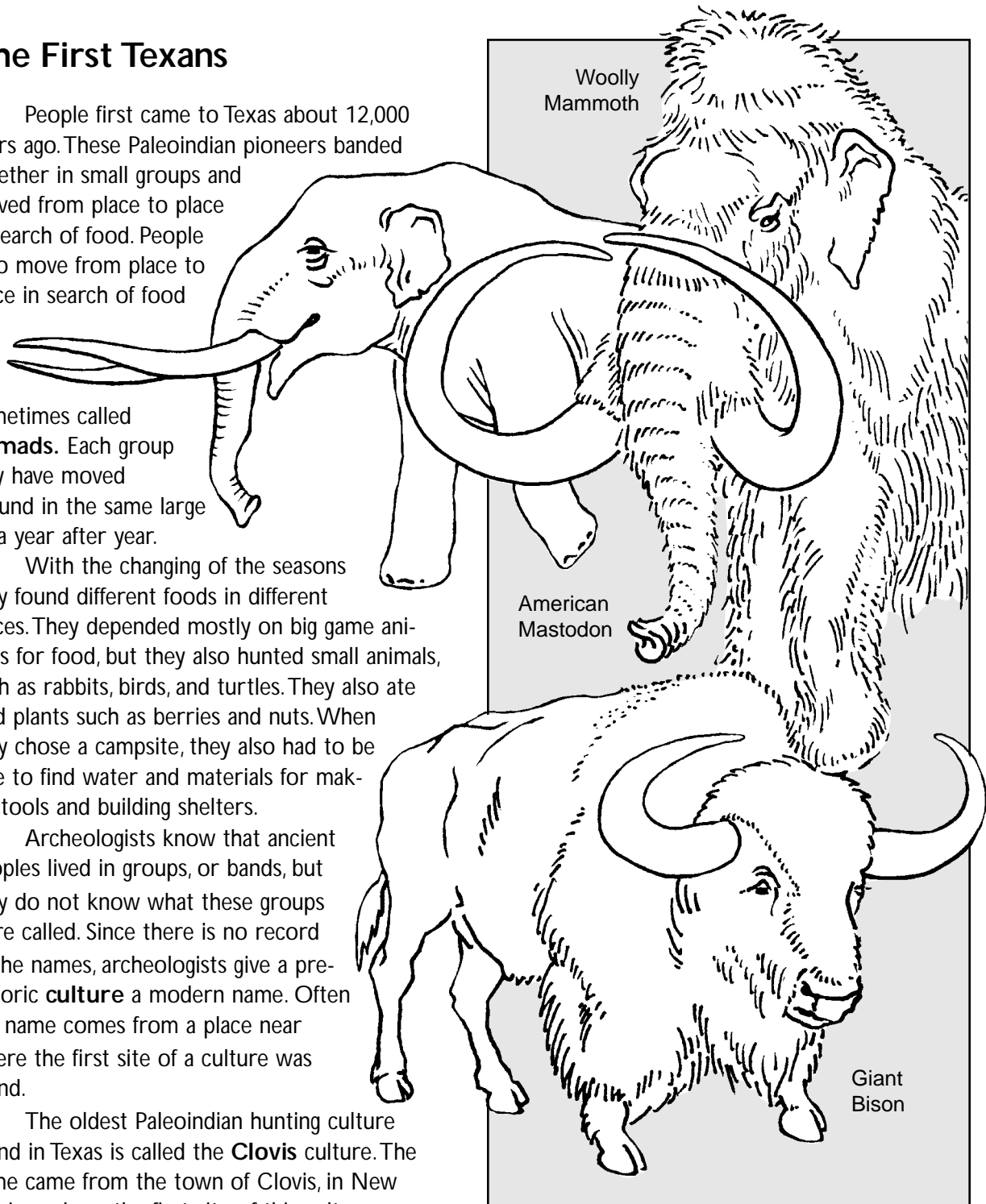
sometimes called **nomads**. Each group may have moved around in the same large area year after year.

With the changing of the seasons they found different foods in different places. They depended mostly on big game animals for food, but they also hunted small animals, such as rabbits, birds, and turtles. They also ate wild plants such as berries and nuts. When they chose a campsite, they also had to be able to find water and materials for making tools and building shelters.

Archeologists know that ancient peoples lived in groups, or bands, but they do not know what these groups were called. Since there is no record of the names, archeologists give a prehistoric **culture** a modern name. Often the name comes from a place near where the first site of a culture was found.

The oldest Paleoindian hunting culture found in Texas is called the **Clovis** culture. The name came from the town of Clovis, in New Mexico, where the first site of this culture was discovered. Clovis people ate plant foods, but hunting was very important to them. One of their most important tools was the **projectile point**. The most distinctive of these is a spear point that is called the Clovis point.

Spear points used by Clovis people have been found at sites where they killed a species of



elephant called **Elephas columbi**, which is now extinct.

The Miami site, the first Clovis site to be discovered in Texas, is located near the town of Miami, in the Panhandle. There, archeologists found Clovis points with the remains of at least five mammoths.

What are



CLOVIS



FOLSOM



PLAINVIEW

Projectile Points?

The sharp, pointed stone hunting weapons made by American Indians are often called arrowheads or arrowpoints. Archeologists call this group of weapons **projectile points**. Projectile points can be compared to bullets: not all bullets are made for rifles, and not all projectile points are for arrows. Most of the points made by Paleoindians and Archaic people were used as dart or spear points. Arrowpoints come late in the history of American Indian hunting weapons.

Projectile points cannot be made from just any rock. A hard stone that can be worked, or flaked, is needed to make a good point. A soft stone, like chalk, that crumbles easily would not make a very good point. Most projectile points in Texas were made of **chert**. This stone is found in many colors, from gray to pink and even purple. Projectile points can be beautiful as well as deadly weapons.

Archeologists know that Indians traveled to places where good stone could be found and then carried pieces to their camps to be made into weapons or tools. Stone-source sites—the places where good flint could be found—are also called **quarry** sites.

One stone-source site in Texas is so famous that it is a national monument. For thousands of years people acquired Alibates **agate** from a place near the town of Fritch in the Texas Panhandle. That site is now Alibates National Monument.

Dating Paleoindian Sites

Many of the animals that Paleoindians hunted are now extinct. Knowing when the mammoth, camel, and large bison became extinct helps the archeologist to learn the dates of Paleoindian sites.

At the Plainview Paleoindian site, near Plainview, Texas, archeologists found 18 Plainview points and the remains of at least 100 large bison.

The places where archeologists have found many animal bones and stone weapons are called **kill sites**. Finding the bones of extinct bison or mammoths and ancient weapons in **association** tells scientists that a kill site dates from Paleoindian times.

Early Paleoindians hunted in organized bands. A group of hunters could attack a herd of animals and drive them into a canyon where other hunters waited. The waiting hunters would have their weapons ready for the kill.

Bands of hunters would also drive herds of large, fearsome bison over bluffs and then finish off any of the animals that were not killed in the fall. This kind of hunting is called the jump method. Sometimes hundreds of bison were killed at one time.

After the Clovis Culture, the next group of prehistoric big-game hunters is called the **Folsom** culture. The people of this culture made a spear point that is called the Folsom point. The Folsom people lived on the plains and in the forests of Texas. They were especially good at hunting a big bison called **Bison antiquus**. This big animal is now extinct.

After the Folsom culture came another hunting group we call **Plainview**. The Plainview people made tools of a different style from those made by the Clovis and Folsom people. The style

of their tools had changed, but the Plainview people still wandered after the animals they hunted just as their ancestors had done.

Spear points were not the only stone tools made by Paleoindians. They also made and used knives, scrapers, gravers, drills, awls, and other tools. Gravers were used to cut holes in hides or engrave slots in bones or antlers.

One of the most interesting tools of the early hunters is the **atlatl**, or spear thrower. The atlatl helped hunters to throw their spears harder and farther. The atlatl worked in much the same way that a sling shot is used to throw a rock.

In addition to stone tools, the **material culture** of the Paleoindians also included the use of fire, clothing, and shelters. However, many of the major sites that have been studied are kill sites, and much of what is known about Paleoindians is related to hunting methods, projectile point styles, and butchering tools and techniques.

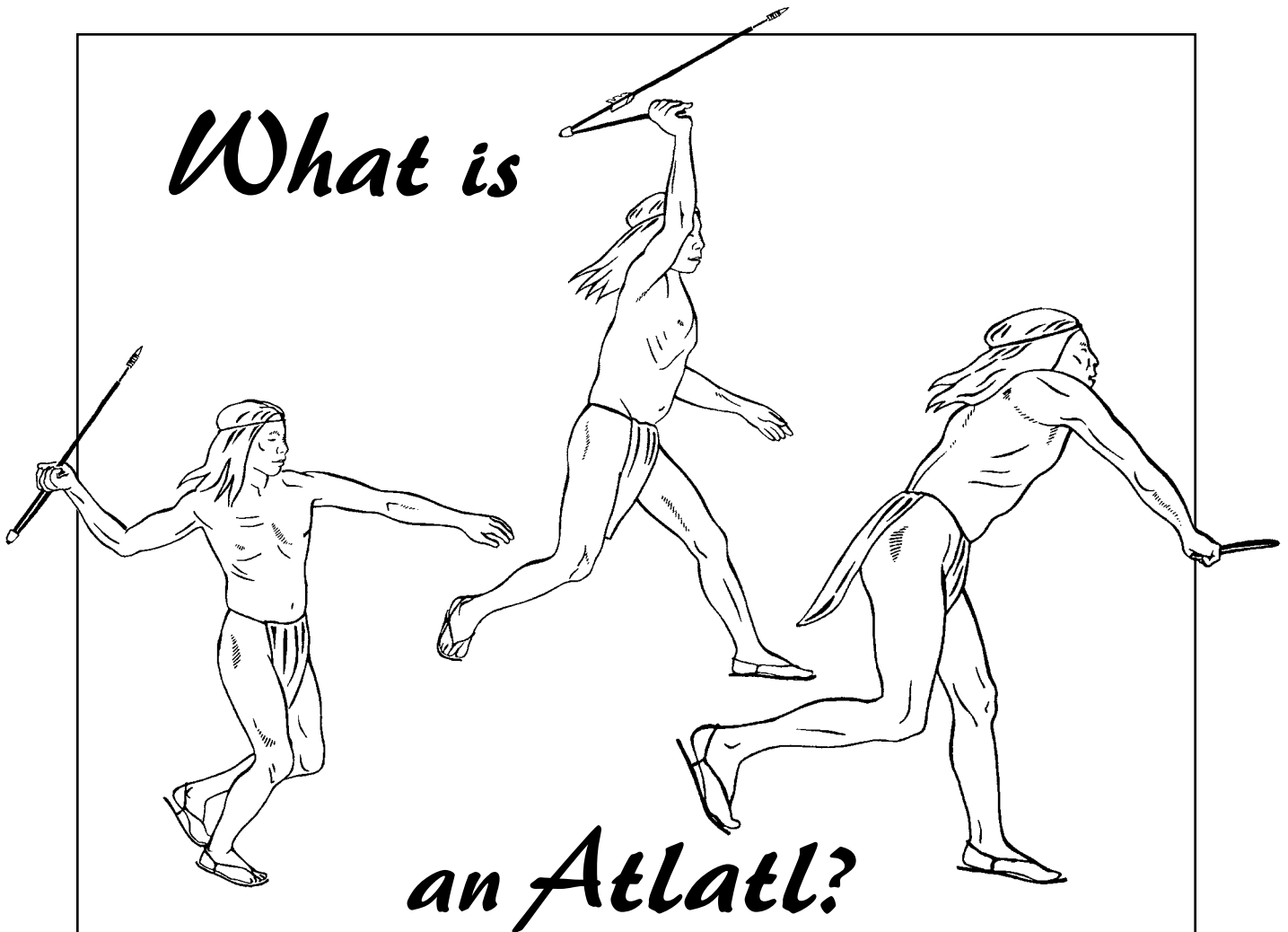
Paleoindian sites are very important because archeologists still need to find and study campsites that can tell us more about how the people lived. Studies at the Lubbock Lake site near Lubbock, for example, show that the Paleoindians relied on many different resources provided by the natural environment.

Nevertheless, as the climate became dryer and big-game animals became extinct, Paleoindians had to adapt their lifeways to changing conditions. These gradual cultural changes led to a new period of prehistory—the Archaic.



Drills like this one were made by Paleoindians and were used to drill holes in bone, wood, or other materials. This drill was made by re-shaping a Dalton projectile point. Dalton points were one of several types of dart or spear points made late in the Paleoindian period. (The drawing is about 2/3 actual size.)

What is

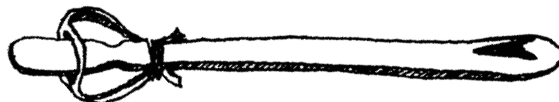


an Atlatl?

Archeologists have recorded the use of the atlatl in Australia and Africa, as well as in America. The atlatl, or spear thrower, made hunting with spears more effective than using a spear alone. Using the atlatl, a hunter could throw his spear or dart hard enough to kill big game from a short distance. Prehistoric hunters in North America must have found that killing a large bison from a distance was a lot easier—and safer—than having to creep up on the animal and stab it with a hand-held spear.

Archeologists do not know whether the American Indians invented the atlatl themselves or brought it from Asia. We believe that the spear thrower was used on the North American continent more than 10,000 years ago. Hunters continued to use atlatls in later Archaic times. After the discovery of the bow and arrow, most groups preferred the new weapon. However, Spanish explorers saw the atlatl still being used in the mid-1500s.

Usually the stone dart tips and the weights used on atlatls are all that remain to show that this weapon was used by ancient hunters. Material that is soft, like the wood in the handle of a spear or an atlatl, usually rots unless it is in a very dry, protected site.



APPLYING YOUR KNOWLEDGE

Are there still glaciers today? If so, where are they located?

Some of the animals that traveled from Asia to America across the land bridge are now extinct.

- Name some animals that live today that are in danger of becoming extinct?
- Which almost-extinct animals are still hunted for food or fur by people today?

How does climate still affect the foods that are available to people?

Name some fruits, vegetables, and nuts that are "in season" during different times of the year. (One good example is the pumpkin, which is in season just in time for Halloween.)

Why is Thanksgiving a fall holiday instead of a spring or summer holiday?

During which season of the year would you have better luck hunting animals than gathering wild plant foods?

How does transportation affect the foods that are available to people? If you had to walk from one camp to another, how would it affect your decisions to store or carry large supplies of food?

What wild animals are still hunted for food in Texas?

"What is missing?" is an important question for archeologists.

- What is missing when a stone spear point is found?
- What things that we use today would not last long if they were left in the ground for many years?
- How would the survival of things we leave behind us affect the way future archeologists interpret our culture?

What's for dinner?

Through thousands of years, from now-extinct mammoths to bison, Paleoindians hunted big game. But large roast beast was not the only meat being cooked over their dinner fires.

Clues to the many kinds of animals that Paleoindians ate have been found at the Lubbock Lake site, near the city of Lubbock. In one area at the site, archeologists found the bones of at least six bison, several muskrats and ducks, a pronghorn antelope, and a deer.

The ways in which the bones were broken and cut marks on the bone showed that the animals had been butchered. And two Plainview points and other stone tools also were found there.

In other areas at the site archeologists have found the bones of snow goose, jackrabbit, cottontail, several kinds of ducks, grouse, and other small animals.





Archaic Hunters and Gatherers

(6,000 B.C.–A.D. 500)

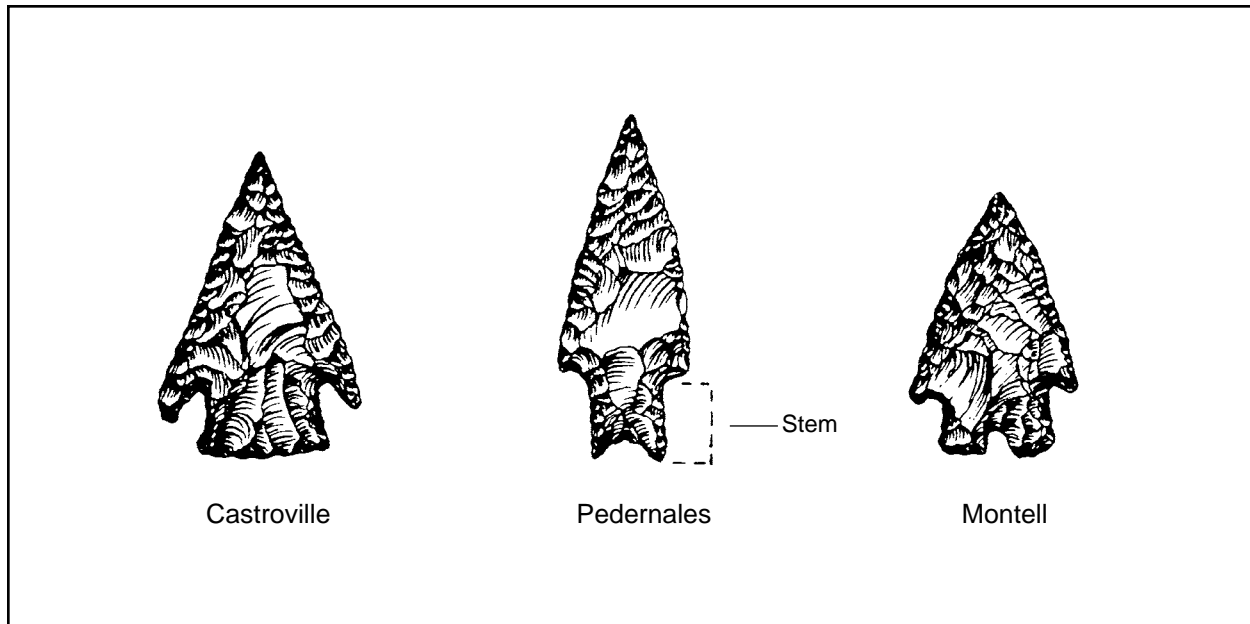
About 8,000 years ago (6,000 B.C.) the basic lifeways of people who lived in Texas began to change. Archeologists call this new period the **Archaic** period. This period is often divided into the Early, Middle, and Late Archaic. During this period the population continued to grow, and there were more people than there had been during the Paleoindian period. They began to make and use many different kinds of tools.

There were many reasons for the changes from Paleoindian to Archaic lifeways, and most of the changes came about slowly. For example, changes in the climate caused differences in the animals and plants that were available for food. Changes in the plants and animals that were

hunted or gathered caused people to develop new kinds and styles of tools.

In Paleoindian times as the population grew, bands could just move to a new territory. As the population became even larger, people became more territorial. That is, the nomadic groups moved about from season to season in the same territory. The territories of Archaic groups were probably smaller than the large areas in which their Paleoindian ancestors had roamed.

Archaic people still organized themselves in bands as their Paleoindian ancestors had done. Each band had a "home range" that covered a fairly large territory along a river or within reach of some other water sources.



Castrovile, Pedernales, and Montell are only three of many different styles of dart or spear points made by Archaic people. The narrower part below the notches at the base is the stem.

Within this range, the band moved from place to place following the food supply as it changed from season to season. Some of the places where they camped were used again and again over the years, as long as the food supply and water sources were good near the camp.

The projectile points that Archaic people made for hunting are different from the early Paleoindian points. Instead of making only a few **types**, as earlier people had done, Archaic flint workers made many different styles.

Archaic people made many tools besides projectile points, and they developed many skills. Making baskets and mats of plant fibers was an important skill. They made net carrying frames and baskets of plant fibers and used them for carrying the foods they gathered. The remains of baskets and other goods made of fibers are rare in most archeological sites, but they have been found in the dry caves of southwestern Texas.

The Archaic Diet

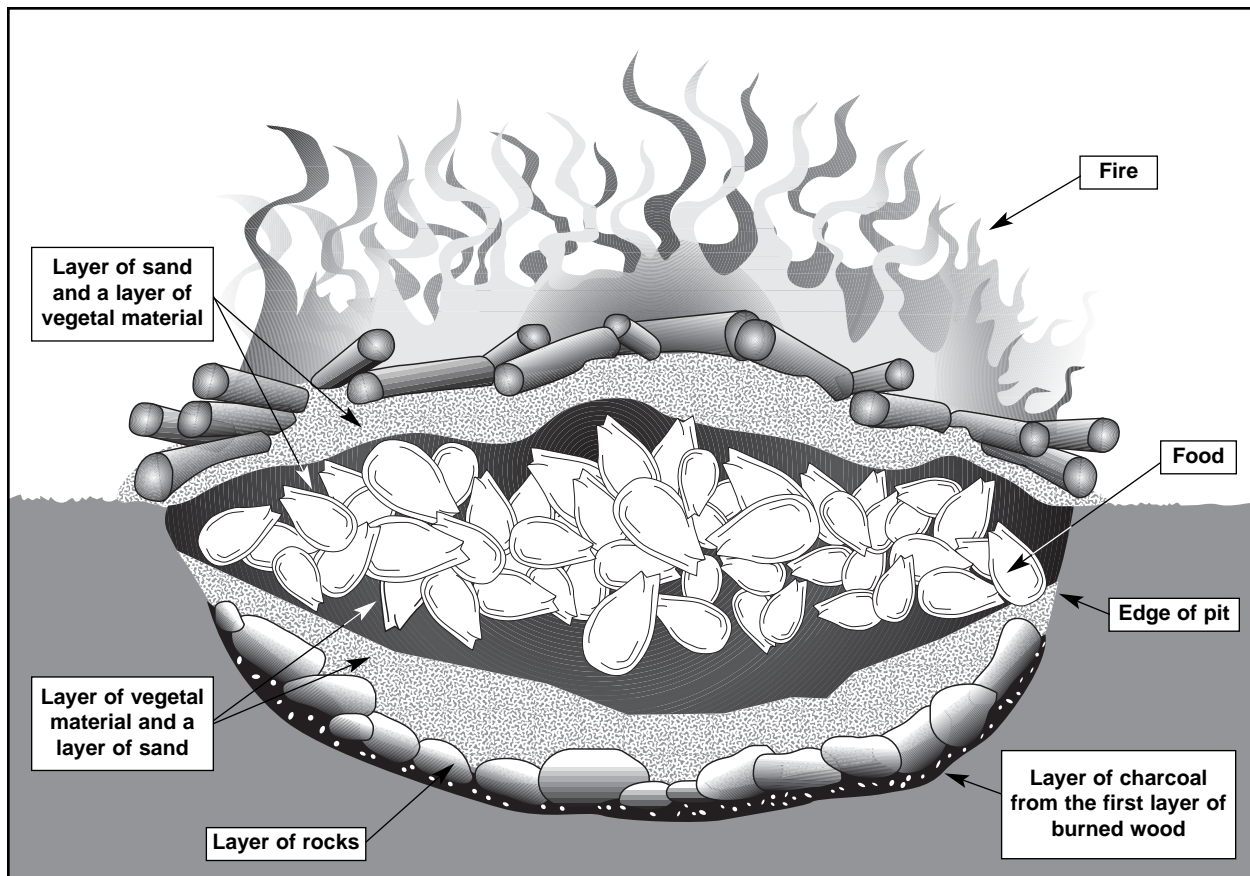
During Archaic times, people depended less on large animals and more on plants and smaller game animals for a food supply. The large game

animals that Paleoindians had hunted were now extinct. A smaller kind of bison and rabbits, deer, and antelope were important foods for Archaic people. Even nutritious insects, such as grasshoppers, were part of the Archaic diet.

Plant foods were an important part of people's diet in Archaic times. Mesquite beans, pecans, walnuts, grass seeds, wild fruits (such as persimmons), the fruit of prickly pear, desert plants like **sotol** and **agave**, and many other kinds of nuts, seeds, and roots were eaten. Archaic people made tools of stone to grind seeds, nuts, and roots into an edible form.

Stone grinding tools called the **mano** and **metate** are found at almost all Archaic sites. Seeds and nuts were ground by rubbing a hand-held stone (a mano) over a metate (on the ground). Prehistoric people also used large wooden or stone pestles to pound foods in mortars (or holes) in slabs of exposed bedrock.

Grinding could be very important in preparing foods. For example, acorns that are ground into meal and soaked in hot water can be eaten almost at once. If whole acorns are soaked in cold water, they must be soaked for months to remove the acid that makes them taste bitter.



This is a profile, or cross section, of an earth oven.

Making and using an earth oven: (1) dig a pit; (2) line the pit with wood; (3) light a fire to burn the wood and heat the rock walls; (4) line the pit by adding stones over the ashes and charcoal; (5) cover the hot stones with sand and a layer of vegetal material (such as grass and leaves); (6) place layers of the food to be cooked on top of the vegetal material; (7) layer vegetal material over the food and cover it with sand; (8) build a fire on top to heat the layers in the oven and cook the food. When pits like this one were opened, the stones that had been used were discarded around the pit. Archeologists call these areas of discarded stone, ash, and other remains from baking ovens "burned rock middens."

Cooking the Archaic Way

Prehistoric Texans often baked plant roots in pit ovens. A pit was dug in the ground, and a large fire was built in the pit to form a layer of hot coals. Rocks were laid over the coals, and then the rocks were covered over and the food was added. Then the food was covered over and another fire was built. After about 48 hours, the pit was opened and the plants were ready to be eaten or ground into meal.

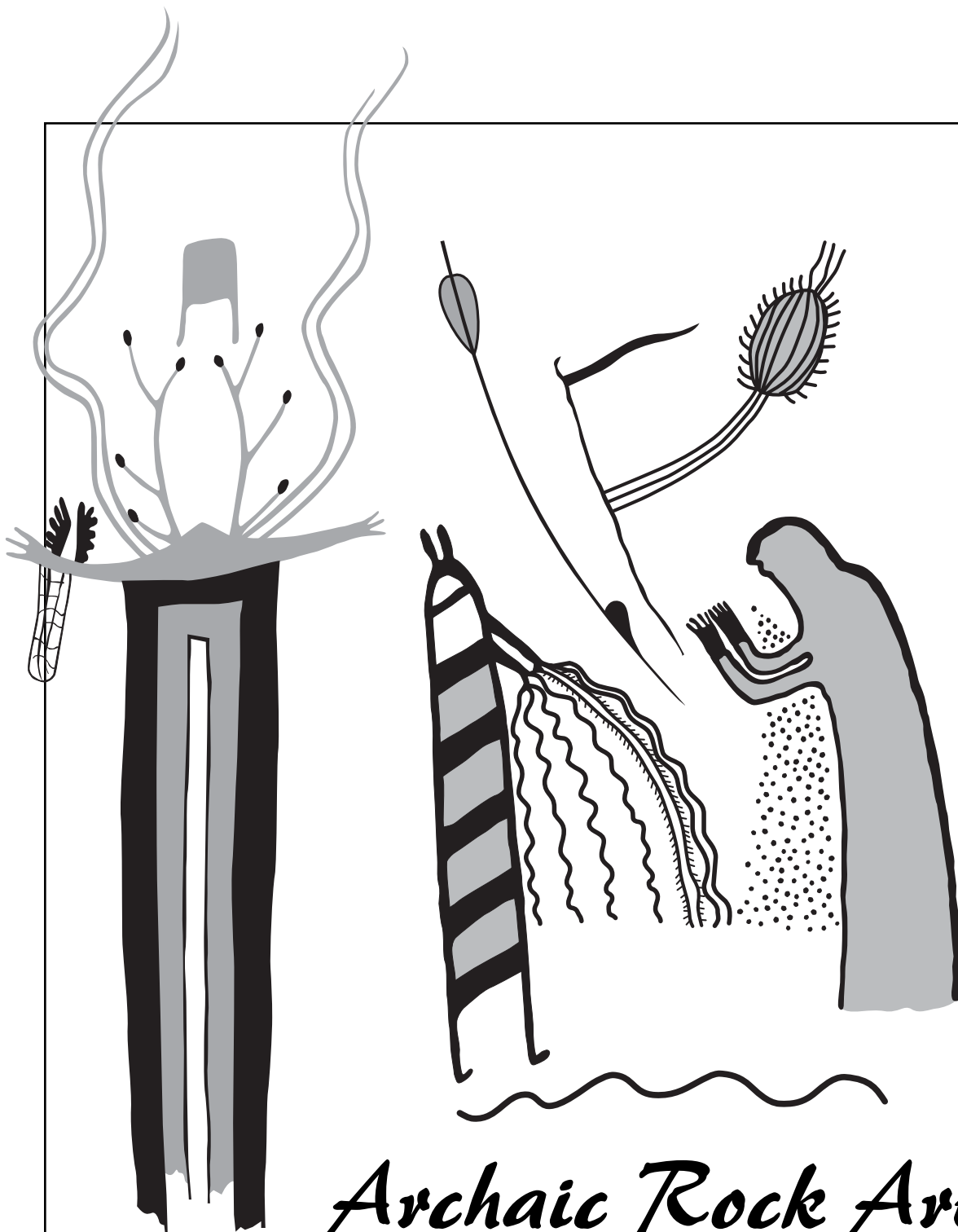
As the same pits were reused, the stone slabs lining the pits would break up because of the repeated use and intense heat. Before the cooking pit was used again, the rocks that had

broken would be thrown out and replaced. As the pit was used over and over, a mound of burned and broken rock would pile up nearby.

Archeologists call these mounds of accumulated stones **burned-rock middens**. Burned-rock middens are a common type of Archaic site in central Texas, and they are found also in other parts of the state

Archaic Shelters

Archaic hunters and gatherers often camped in caves and rockshelters. They also built shelters at some camp sites. Archeologists have studied the materials that would have



Archaic Rock Art

Archaic paintings and designs etched into stone have been found on boulders and on the walls of caves and rockshelters in Texas. **Shaman** figures in ceremonial masks and robes are common in pictograph sites in far western Texas. A shaman was a religious leader, or medicine man. Archaic people, in addition to painting shamans, included many other human and animal figures in their rock paintings and etchings. Hunting scenes often include the horned animals, such as bighorn sheep, deer, and antelope. Abstract designs, such as wavy and zigzag lines or geometrical shapes, also are common.

been available to Archaic builders. Archeologists have also studied the kinds of shelters built by people of recent times who lived by hunting and gathering.

Based on this research, archeologists believe that Archaic people built a framework of poles and stretched animal hides over it or thatched it with grasses and tree branches. No shelters made by Archaic people have survived. Only clues buried in the earth remain at their camp sites.

What Archaic People Wore

Clothing and footwear of prehistoric times were made of materials such as animal skins and plant fibers. Simply woven textiles of fur and plant fibers were made and used much as we use cloth today. Clothing and covers were also made from animals skins. People wore sandals that they made of plant fibers. In winter, they may have wrapped animal hides around their feet and legs.

No remains of clothing have been found in sites that are earlier than the Archaic period. Only in protected sites (such as dry caves and rockshelters) are the remains of clothing and sandals found. Many items made of plant fibers and wood have been found in Archaic sites in dry rockshelters and caves in southwestern Texas. A few items have even been found in well-protected rockshelters in central Texas.

Because most clothing was made of perishable materials, we know little about the styles of prehistoric clothing. It is known that prehistoric people in Texas depended mostly on worked animal skins for clothing. Bone needles and awls used in sewing the skins have been found. Processing skins was an important task throughout the prehistoric period. Stone scraping tools that were used in preparing the hides are common in prehistoric sites.

The clothes that people wore in the warmer months may have been very simple. For example, men probably wore **breechcloths**, or

loincloths. When the weather was cold, people may have added robes or "blankets" of bison hides or other furs over their usual clothing.

Most of the ideas we have about what prehistoric people in Texas wore are based on the types of tools that have been found (scrapers, awls, and needles) and on the remains found in dry, protected sites. Beads and pendants of stone, bone, and shell also have been found in archaeological sites. These tell us that personal ornaments were important to prehistoric people, just as they are to people today.

APPLYING YOUR KNOWLEDGE

How many kinds of seeds do you eat? Make a list.

How large is your "home range" (the area that you move around in, in your everyday life)?

- What places—house, grocery store, and others—are included in your home range?
- Would your home range be smaller if you could not ride in cars or buses?

What are some modern methods of processing food to preserve it for eating later? Dried fruit is one example.

A source of water is very important to people and animals.

- Do most people in the world today have to live close to a natural water source? Why or why not?

What resources do you think Archaic people would need in a camping area?

- Would they have different needs for an overnight camp and a camp where they stayed for several months?



Late Prehistoric Peoples (A.D. 500–1500)

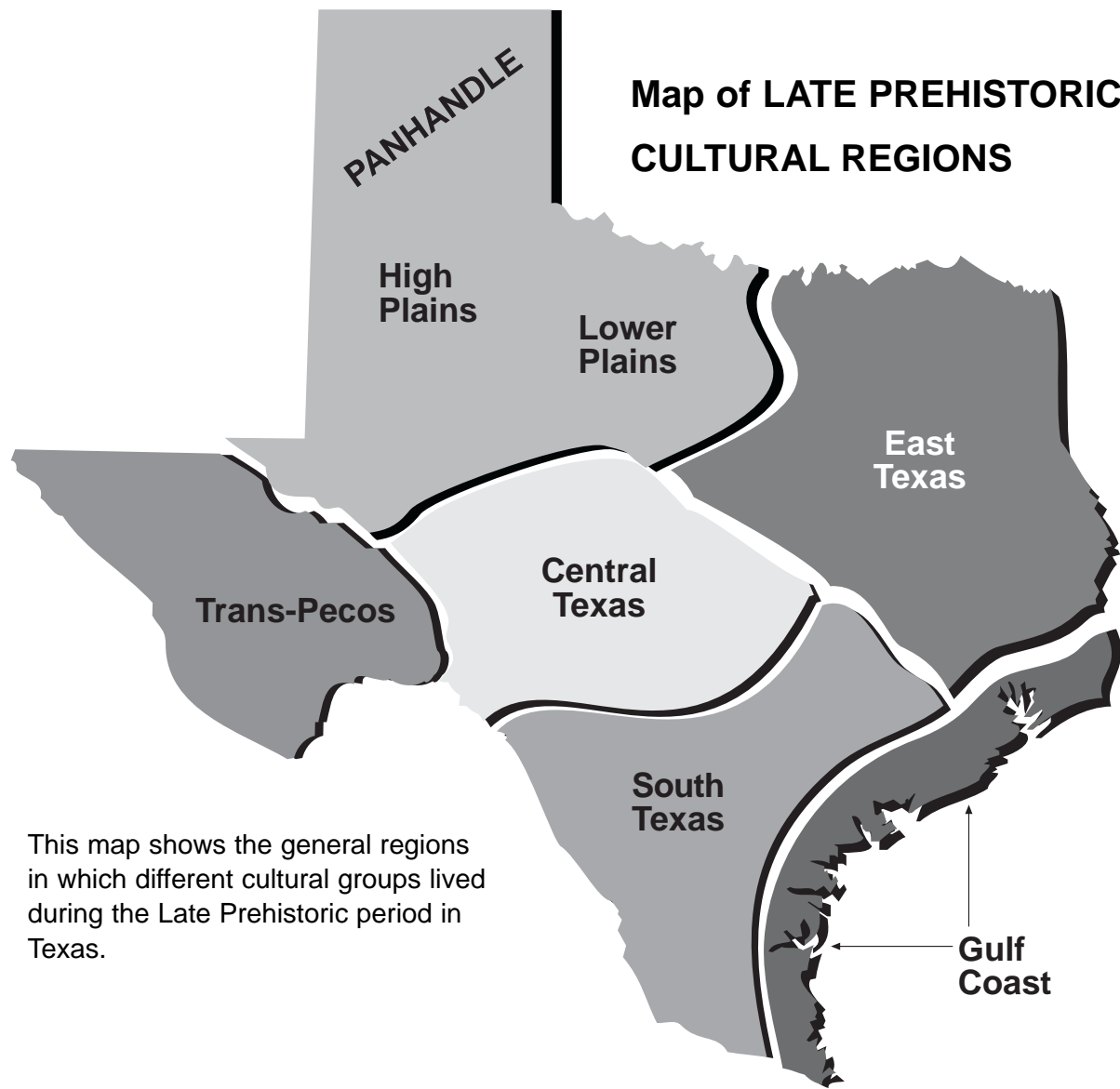
Beginning at about A.D. 500, new tools and new ways of producing food changed the lifeways of people in Texas. Some groups began to grow their own food (or to practice **agriculture**), make pottery, use the bow and arrow, and live a settled way of life. They began to live in villages instead of seasonal campsites.

These changes did not happen all at once. Some **Late Prehistoric** groups continued the wandering lifeways of their Archaic ancestors.

These nomads still lived in small bands and depended on hunting and gathering for their food.

East Texas

In northeast Texas lived gardeners in villages. Women and men worked together to produce vegetables and grains. They also gathered nuts and berries, hunted small animals, and fished.



This map shows the general regions in which different cultural groups lived during the Late Prehistoric period in Texas.

Most of these people lived in large, permanent villages. Although they were farmers, hunting was still important to them. Sometimes groups of hunters traveled as far as the Panhandle or central Texas to hunt bison.

Because the people could grow and store food, the farmer villages became larger and life-ways became more complex. People in the villages were now able to **specialize**. That is, while some worked to get food, others could become hunters, artists, potters, or priests.

They built large earthen mounds that they used for special purposes. The George C. Davis site, in Cherokee County, is one of the best known mound sites in Texas. The ancestors of

Caddo Indians lived there for over four hundred years (from the late ninth century A.D. to the early fourteenth century). One of the mounds there, measured by archeologists, was about 5 meters (16 feet) high, 83 meters (270 feet) long, and 50 meters (165 feet) wide.

A mound was built as the base for a temple or for the house of an important person. Some mounds were also used as burial places for special priests or great leaders. Beautiful pots and ornaments were placed in these special burials, while common people were buried more simply. Mounds were also places where religious and political activities took place, so these sites are called **ceremonial** or **social centers**.

Early Farmers

People who lived in the New World were skillful farmers, and they first **domesticated** many of the plant foods we enjoy today. Corn, green beans, pinto beans, potatoes, tomatoes, chile peppers, squash, pumpkins, chocolate, avocados, pecans, peanuts, and many other foods were raised or gathered in the wild. Prehistoric people also used domesticated plants besides foods, such as tobacco and cotton. Animals—most commonly dogs, but sometimes turkeys—also were domesticated.

A thousand years ago—long before Columbus "discovered" America—the ancestors of Caddo Indians in east Texas were living in settled agricultural villages. The clues survive in gardening tools and the remains of corn, squash, and beans. Archeologists have found this kind of evidence in many Late Prehistoric sites in Texas.

Trans-Pecos Texas

The Trans-Pecos is the region of Texas west of the Pecos River. Some of the people who lived in this part of western Texas in Late Prehistoric times were still nomadic, hunting and gathering wild plants for their food. These nomads often camped in caves and rockshelters, just as the Archaic peoples before them. Some of the most striking Indian art in North America is found in these caves and rockshelters that people used as camp sites over thousands of years.

In far western Texas some Late Prehistoric Indians settled down to a **sedentary**, agricultural way of life. The area in which they lived extended from about where El Paso is today to the south-east along the Rio Grande, toward the Big Bend

area. These settled people lived very much as the east Texas farmers lived. They stayed in one place, built permanent villages, cultivated plants, and made pottery. However, the houses they lived in were very different from those of their faraway east Texas neighbors.

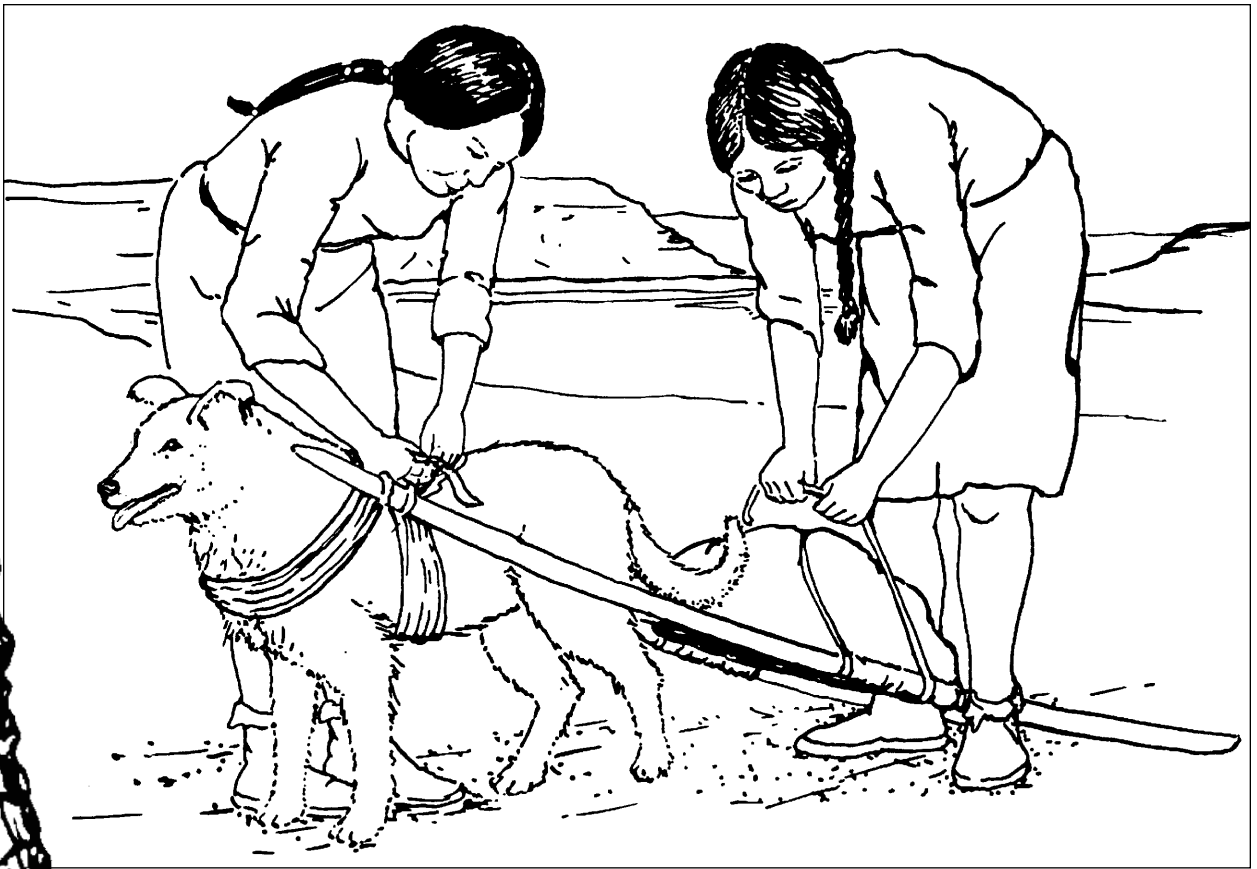
The western farmers built houses close together in one-story, above-ground **pueblos** made from **adobe** (mud brick). The houses of western Texas Indians were similar to the pueblos in what is now New Mexico. The farmers of west Texas also were similar in other ways to their neighbors in New Mexico. For example, some of the pottery made in west Texas is like pottery made in New Mexico.

The Panhandle and the Plains

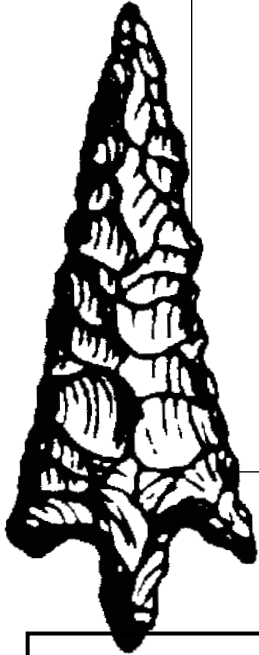
In the Texas Panhandle other groups of Late Prehistoric Indians depended on agriculture for part of their food supply. These people settled in an area along the Canadian River and built permanent buildings. Some of their villages were built on the tops of mesas and hills that could be easily defended from their enemies. Their houses, built of stone slabs, were placed side by side with the walls touching, like pueblos. Although the people grew crops, bison hunting was still very important to them. One of their typical tools is a hoe made of the shoulder-blade bone of a bison.

These Panhandle villagers traded with groups in other parts of Texas. They also traded over long distances with other groups living in the southern Great Plains region. Their main items of trade were probably bison meat and hides. Some of the items that they got in trade—such as **turquoise** and pottery from New Mexico—have been found in sites where their villages were located. By A.D. 1450 the villagers had disappeared. Drought may have caused the villagers to give up farming and become nomadic hunters. Or, they may simply have moved away.

Toward the end of the Late Prehistoric period, nomadic bison hunters came to the Texas



Dogs were domesticated animals. Some nomadic tribes among the **Plains Indians** used dogs to help them move their possessions. The **travois**, which was pulled by dogs, consisted of two poles serving as shafts and a platform or net, hung between the poles, on which the load was placed.



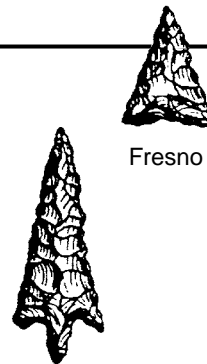
Late Prehistoric Artifacts

Late Prehistoric remains such as arrow-points, pieces of pottery, and the ruins of ancient structures help the archeologist understand Late Prehistoric cultures.

Fresno, Scallorn, and Perdiz are only three of many arrowpoints made by Late Prehistoric people in Texas.

Many sizes and types of pottery vessels were made by Late Prehistoric people. Some were very simple cooking pots, but many were decorated with engraved designs, like the bottle in the picture.

Ornaments, baskets, sandals, woven mats, and other objects also were made by the Indians of Texas in the Late Prehistoric period.



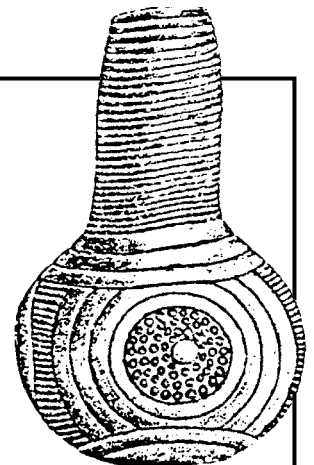
Fresno



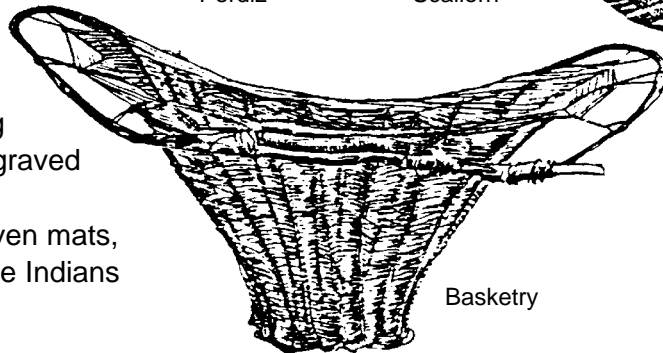
Perdiz



Scallorn



Pottery Bottle



Basketry

Panhandle and Plains region. Some of these hunters were ancestors of the Apaches, one of the best-known historic Indian groups in Texas. These nomadic peoples are sometimes called pre-horse Plains Indians.

Central and South Texas

In central and south Texas there were no settled farmers. Indians lived by hunting and gathering, and they probably stayed in seasonal camps. Wild plant foods such as the prickly pear fruit, acorns, mesquite beans, and pecans were collected when they were in season. In the wintertime, the people hunted buffalo and other animals. Late Prehistoric people in this region lived very much as their Archaic ancestors had lived. However, they used the bow and arrow, and most groups made simple ceramic pots.

The Texas Gulf Coast

Along the Texas coastal region, Indians gathered wild vegetables, such as mesquite beans and prickly pear fruit. They hunted deer and smaller animals and ate fish, clams, and oysters. They made dugout canoes to use in gathering seafood from the coastal waters. Some of these Late Prehistoric people had territories that included both coastal and inland areas. They wandered from place to place in small groups, gathering wild foods and hunting.

The lifeways of Indians along the Texas Gulf coast also were much the same as they had been in Archaic times. However, some of the coastal Indians made pottery, and they all used the bow and arrow.

Archeological sites called **shell middens** are a common type of site left by coastal Indians. The middens are like a landfill made up of the remains of oyster and clam shells mixed with other trash and discarded items. The size of some shell middens tells archeologists that prehistoric people often returned to the same coastal sites year after year. When there were lots of shellfish,

the people must have enjoyed large feasts at some of the sites.

APPLYING YOUR KNOWLEDGE

Some people became specialists in Late Prehistoric times.

- Right now you are probably a student—a specialist in learning.
- Can you name some modern specialists?

Name some modern ceremonial, civic, or social centers.

- What evidence might be found in these centers that would help future archeologists identify them?

Corn is one of the most important food grains in the world today, and it was first domesticated by prehistoric people in the New World.

- Find out more about New World foods that are still important today.

Trade was common in prehistoric times, even though walking was the most common means of traveling. (Some groups did use canoes along the coastlines or riverways.) Some trade items from places as far away as the Pacific coast have been found in Texas sites.

- How do you think shells were traded? Do you think one trader walked all the way from California to Texas carrying shells? Or, do you think the shells were traded eastward from group to group until at last they were traded to a Texas group?
- What do you think people learned about different lifeways through their trade contacts?
- What are some ideas they might have traded in this manner?



Historic Indians (AFTER A.D. 1500)

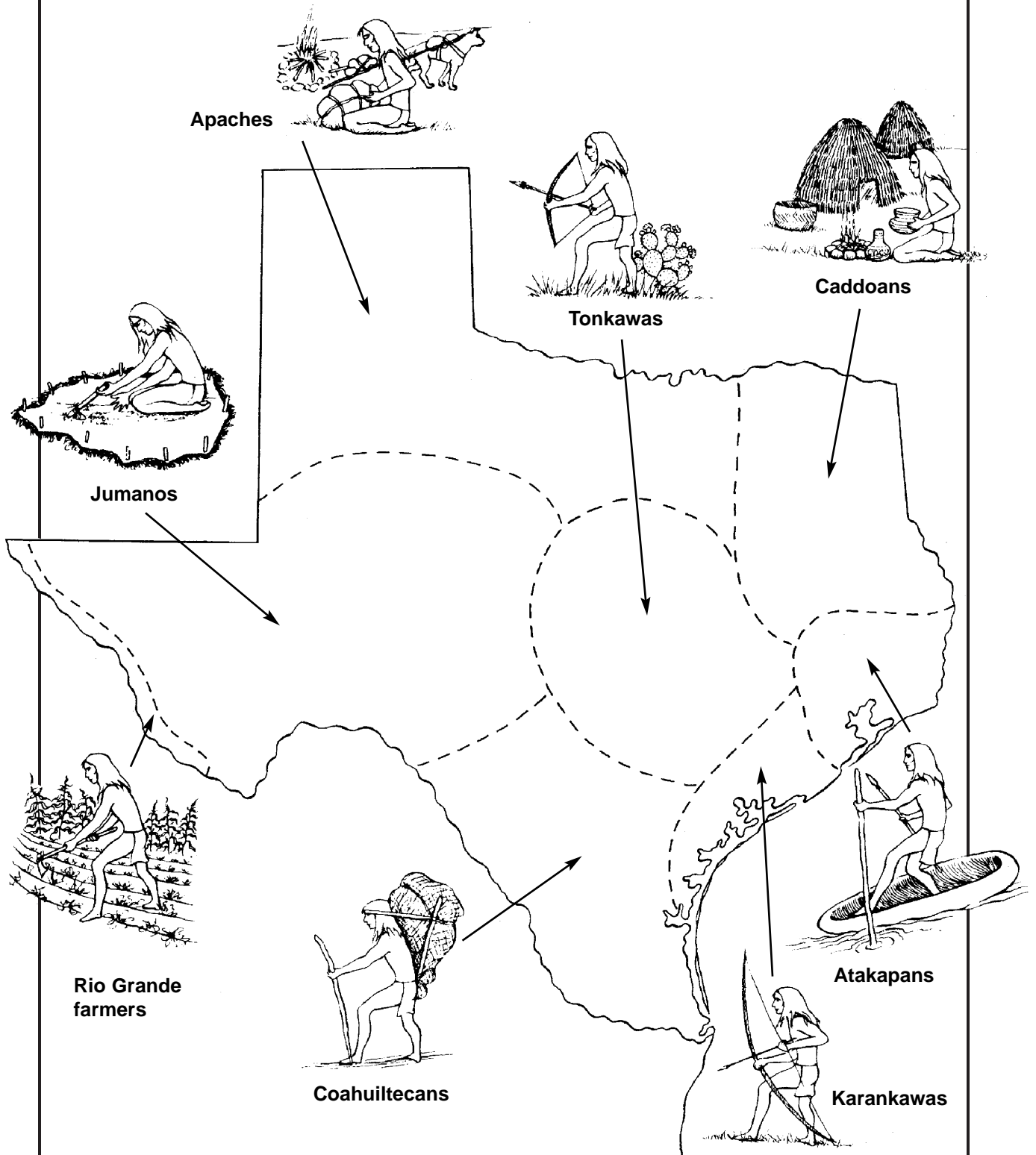
Native Americans had lived in Texas for thousands of years before the arrival of European explorers. However, some groups, such as the **Comanches** and **Apaches**—the tribes we usually think of as Texas Indians—were newcomers. The Apaches came to Texas from the north very late in Prehistoric times, and the Comanches arrived even later, in the **Historic** period.

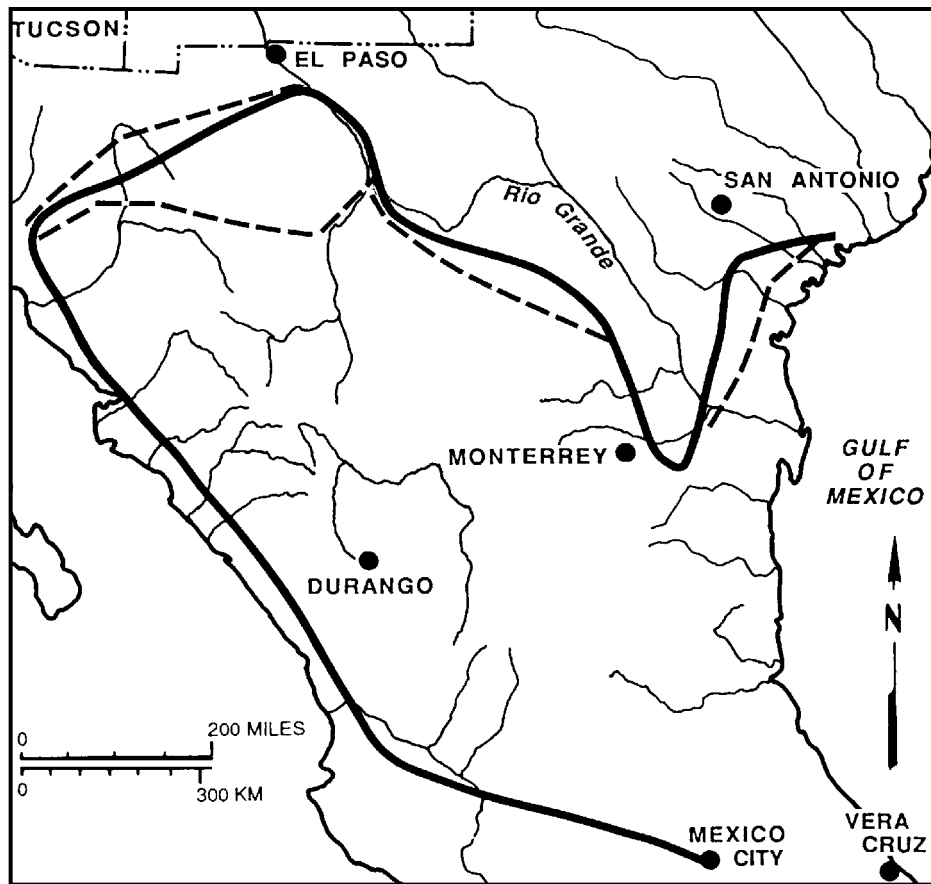
The Historic period in Texas began with the arrival of the Spanish. The first Spaniard known to

visit Texas was **Cabeza de Vaca**, who was shipwrecked on the coast in A.D. 1528. The account of his journey across Texas marks the beginning of the Historic period. Other explorers and priests soon followed, and their journals, letters, and reports describe the first meetings of Native Americans and European newcomers.

In the very early Historic period, when European explorers first came to Texas, Indians were living as they had lived in Late Prehistoric

General Location of the Major Indian Groups of the Early Historic Period





*This map shows the route of Cabeza de Vaca as it has been traced by historians and archeologists (the dotted line shows where the experts disagree on the exact route). Knowing where the early explorers traveled is important because their accounts of their journeys contain information about the Indians they met and the environment as it was before European settlement. The study of Historic Native Americans from these written accounts is called **ethnohistory**.*

times. In some areas, traditional ways of getting and processing food through hunting, gathering, and agriculture continued into the early Historic period. For example, drying meat was an important food-processing tradition. Dried meat (jerky) was easier to carry about and lasted longer than fresh meat. **Pemican** was made by mixing together ground-up dried meat and plant foods such as berries. Pemican was a convenient "trail mix" for nomadic tribes.

The clothing and appearance of early Historic Indians—before they were changed by European influence—varied as much as the life-ways of the people did. People of the nomadic tribes, such as the **Atakapans**, **Karankawas**, **Coahuiltecan**s, and **Jumanos**, dressed very simply. The men wore breechclouts, and the

women wore simple skirts of animal skin. Buffalo robes or coverings of other animal skins were used over their usual clothing to provide warmth in winter.

The clothing of the sedentary, agricultural people was much more elaborate. The Caddo, who lived in villages in east Texas, made clothing of expertly tanned deerskins. Some of their clothing was painted and ornamented with fringe and seeds. They probably wore their decorated clothes for ceremonies or other special occasions. Women sometimes wore skirts of cloth woven from plant fibers or made from bark. In addition to skirts and breechclouts, the Caddo made moccasins, leggings, and shirts of deerskin. They also used buffalo robes for extra warmth in winter.

Contact and Change

In early Historic times, which archeologists call the **Contact** period, many of the Indians of Texas were still living in ways that had developed in the Late Prehistoric period. For example, the Caddo Indians of northeast Texas continued to grow crops and make pottery and many kinds of stone, bone, and wood tools. Apaches in the Panhandle hunted bison just as Plains Indian cultures had done in Late Prehistoric times.

European influence soon changed traditional lifeways throughout North America. The Indians quickly learned to use new skills and materials that were introduced by the Spanish. Learning to ride horses and use guns were major changes, but they were not the only changes in traditional Indian lifeways. For example, the Indians soon learned to make tools from metals such as iron, which was brought by Europeans. Arrowpoints made of metal—and even arrowpoints made of glass—have been found in many Historic Indian sites.

The Historic period brought many changes to the Indian cultures—changes that destroyed some groups and changed the lives of all. Lifeways that had taken thousands of years to develop were changed abruptly all across North America with the coming of the Europeans. Horses, guns, competition for land, and diseases altered forever the lives of Native Americans.

Horses were brought to Texas by the Spanish. Indians acquired the animals either by catching wild horses (mustangs) that had escaped from the Spanish, or by raiding the herds at Spanish settlements. Indian hunters quickly became expert horsemen, hunting buffalo on

horseback, keeping up with the herds and killing them more easily.

In the early 1700s the Comanches swept into Texas on horseback, forcing many Texas Indians from their traditional territories. Guns brought by the French and Spanish also changed the patterns of Indian life.

As the frontier pushed ever westward, the eastern farming Indians were forced west by European settlers who wanted the farm land. Western Indians were forced to give up some of their land to make room. The Indians found that the new lands were not easy to farm. Hunters also had to learn new skills in order to hunt different kinds of animals.

New diseases were brought by Europeans into Texas. Smallpox and cholera killed entire tribes of Indians. Competition for new territories caused warfare among the tribes. And the Indians became more hostile as settlers pushed westward, claimed land, and built forts to protect settlements and wagon trails.

By the 1870s, European and Anglo-American buffalo hunters had exterminated the bison in Texas. They killed the animals just for their hides and left the meat to rot on the plains. The destruction of this important food source made the traditional lifestyle of the Plains Indians impossible.

Warfare, diseases, and the push to the west quickly reduced the number of native Texans to less than half of what it had been before the Europeans came. Today only three tribal groups live within the boundaries of the state.

The **Alabama** and **Coushatta** Indians were closely associated before they came to Texas in the early nineteenth century. In 1854, the State of Texas gave 1,280 acres to these people, and that land was the beginning of the **Alabama-Coushatta** Reservation in east Texas that exists today. Although the Alabama-Coushatta have adopted many of the ways of the modern society that surrounds them, they still retain their language and many of their traditions. Their reservation, near Livingston in Polk County, is open to visitors.

The **Tigua** Indians came to west Texas in 1680 from New Mexico. They were granted 36 square miles of land by the Spanish, but through the years their rights to this land were disputed and lost. In 1967, the State of Texas recognized them as a Texas Indian tribe. There were then about 90 families living in a section of the town of **Ysleta**. Ysleta is now part of El Paso, and the Ysleta pueblo and mission church are open to visitors. Near El Paso is **Hueco Tanks**, a rock art site connected with both historic and prehistoric groups. The rock art is protected in a state park.

The Texas Band of **Kickapoo** Indians is a sub-group of the Kickapoo Tribe of Oklahoma. Many years ago, this group was forced to migrate from its ancestral lands to an area that is now in Texas and Mexico. Recently they have been living on the border in Eagle Pass, but their status as United States or Mexican Indians was not clear. In 1983 the Texas Band was recognized by the federal government. This means that members of the band can now get services that the U.S. government provides to other Indians. One hundred acres of land in Maverick County has been set aside for the small band of Texas Kickapoos. Their right to cross the U.S.-Mexico border is part of the new federal law, which is called the Texas Band of Kickapoos Act.

None of the Texas Indian cultures that were present at the beginning of the Historic period now lives within the borders of Texas. By 1880 they had been forced out of the state or destroyed. A handful of **Lipan Apaches** live in New Mexico, a few **Tonkawas** in Oklahoma, and the **Wichitas**, Caddos, and Comanches are joined together on reservations in Oklahoma. The Karankawas, Coahuiltecans, Atakapans, Jumanos, and others have all disappeared—vanished forever.

The experience of all the Indians of North America was much the same as it was in Texas. How did they feel about the changes that came in the historic period? A **Sioux** Indian of the northern plains expressed it this way:

They made us many promises,
more than I can remember,
but they never kept but one;
they promised to take our land and they
took it.

APPLYING YOUR KNOWLEDGE

Some Historic Indians adopted clothing styles from Europeans.

- What other things, besides guns and horses, may Indians have adopted from Europeans?

Many place names in Texas (such as the names of rivers) were adopted from Indian words.

- Name at least three Texas place-names that came from Indian words.

Who is "us" in the Sioux poem? Write your own poem telling how you feel about the Indians of Texas.

There are only three tribal groups in Texas, but many Native Americans live in the state, and in the United States there are almost 2.5 million Native Americans.

- Name any famous, 20th-century Native Americans that you know about.
- Do you need to learn more about the Native Americans of yesterday and today? Books about Texas Indians, including books for young readers, are listed in the resources section, in Part III of this unit.

Historic Texas

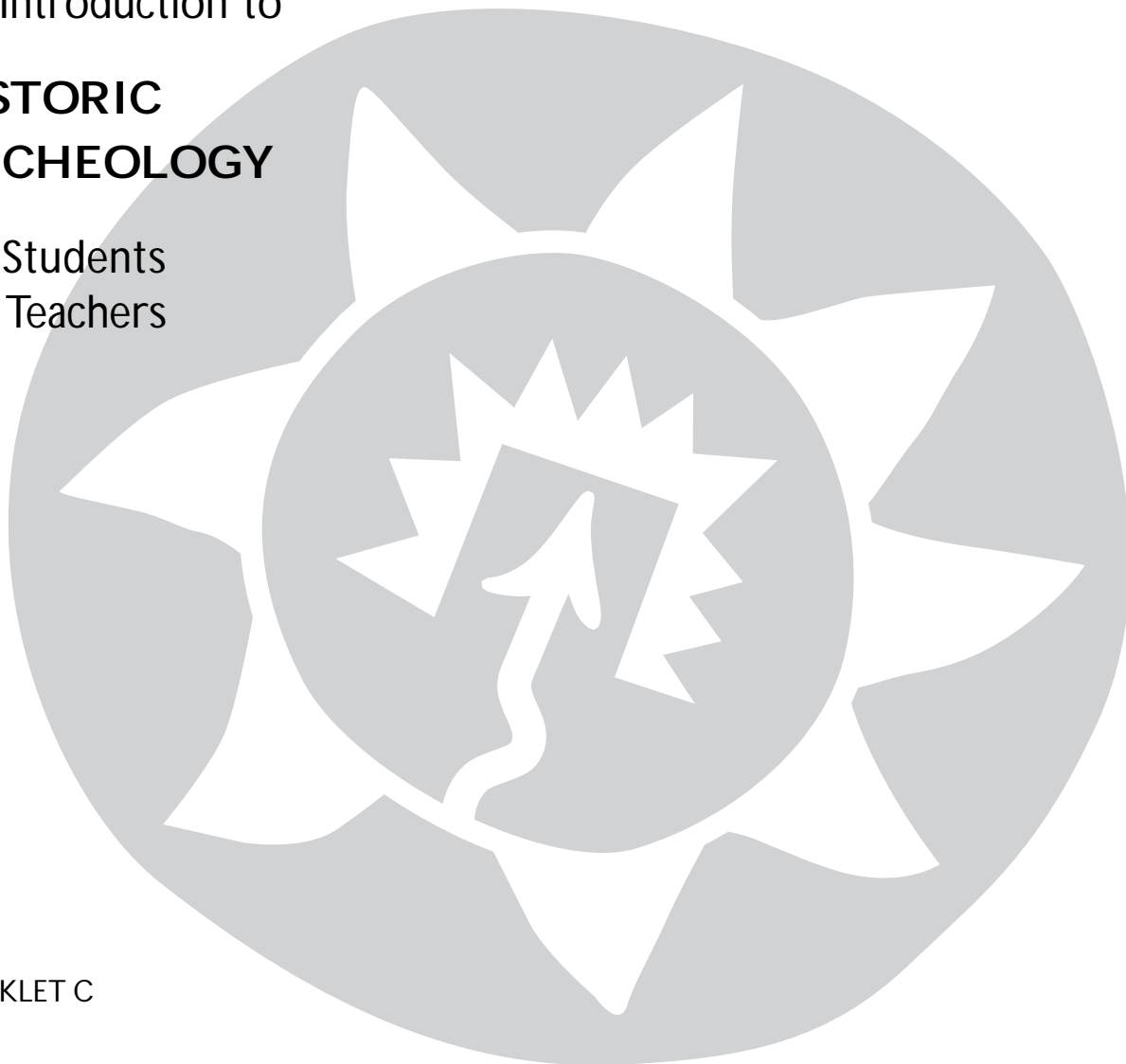
An Introduction to

HISTORIC ARCHEOLOGY

for Students
and Teachers

BOOKLET C

Archeology Divison
TEXAS HISTORICAL COMMISSION
Austin 1998



Preface

This section, or "booklet," on Texas from the period of exploration through the 19th century is intended as an introduction to historic archeological sites in Texas for teachers and students. The reading level of this section is more appropriate for middle-school students and above. Teachers may photocopy without permission any or all of this section for classroom use only. Other use of this material requires permission from: Archeology Division, Texas Historical Commission, P.O. Box 12276, Austin, TX 78711-2276.

Teachers may choose to use this material either as background information for classroom discussion or as text to be assigned for reading.

This section should serve as general background information for the classroom activities relating to historic sites in Part II of this unit for teachers. Those who want more information should see the list of books and other resources in Part III.

"Historic preservation on the threshold of the 21st century is about much more than bricks and mortar. It is about saving, creating and enhancing community."

—Richard Moe
President, National Trust for Historic
Preservation, 1997

Permission: Office of the State Archeologist archeological reports; *You Are the Guardian of the Past* (1995 edition); *CRM News & Views* newsletter (various issues, 1997) and *The Medallion* newsletter (various issues, 1997).



Archeological Sites and Historic Times in Texas

Introduction

The Historic period begins with the coming of the Spanish in the 16th century A.D. Like pre-historic sites, historic sites often require archeological investigation before they reveal their centuries-old secrets. Combining archeological and historical study methods can add to what we already know about many historic places—even sites as well known as the Alamo.

What are some examples of important historic archeological sites in Texas? There are so many that we can only mention a few types that have been studied by archeologists.

Exploration and Colonization (1659–1836)

Texas was part of the northern frontier of Spanish settlements in the New World. These set-

tlements included villages, **presidios** (forts), and **missions**. Spain's main reason for establishing its first settlements in Texas was to keep the French from gaining control of more territory.

Missions were established to **Christianize** the Indians, and the presidios were set in place to protect the missions and other settlements. The Spanish hoped that the Christianized Indians would adopt European farming methods and that the missions could become towns.

Spanish settlement relied mostly on farming methods and familiar foods from Europe. Because of this, the settlements usually were located in areas where these farming traditions were possible. For example, missions were usually located near rivers that could be used for **irrigation**. Besides farming, the missions were successful in raising cattle, especially in the San Antonio area.

Among the best-known Spanish sites in Texas are the San Antonio missions—now included in a national historic park. Archeological investigation

has played a role in restoring these and many other 18th-century structures. Archeologists have also studied the system of **acequias** (irrigation canals) and ranches associated with the missions.

Spanish shipwreck sites have been found on the Texas coast, off Padre Island. They contain some of the most valuable historical information and artifacts to be found in underwater sites in the Western Hemisphere. In the late 1960s, a 1554 Spanish shipwreck site was excavated. Artifacts from the ship are now on display in a museum in Corpus Christi.

When Mexico won independence from Spain, Texas became part of Mexico. This era of Texas history is very brief (1821–1836), and only a few settlements date from those years. Most of the new Mexican settlements were associated with ranching. One of the best-known towns of this period is Victoria, founded in 1824.

Most people probably think that all of the important Spanish sites in Texas were located and studied many years ago. Not so! During the past five years, two new sites of national importance have been located by archeologists.

Coronado's Campsite

From 1540 to 1542 an expedition led by Spanish explorer Coronado traveled four thousand miles through the American Southwest in search of gold. The expedition included about 1,500 Indians, 300 Spanish soldiers and adventurers, and thousands of domestic animals—cattle, sheep, and horses. In spite of the many people animals, and all of the gear they must have needed, material remains of their presence in Texas have been hard to find.

An archeologist began looking for one of Coronado's campsites in Texas in the early 1990s. In the spring of 1996 he announced that a campsite had been located in Blanco Canyon in the Texas Panhandle, near the town of Floydada.

The site is of great importance in Texas history because it relates to the first encounter of Europeans with Indian groups of the Panhandle-

Plains region. Accounts of the Coronado expedition contain the first descriptions of Plains Indians in Texas.

European artifacts found at the site include: **crossbow** points, a complete horseshoe dating from the period of Spanish exploration, and a **chain mail** glove.

The site has been assigned the number 41FL81, for the 81st archeological site recorded in Floyd County.



The horse was introduced to Native Americans by the Spanish and soon appeared in historic rock art. Petroglyph from Garza County.

Mission San Sabá

In 1757, in what is now Menard County, the Spanish established Mission Santa Cruz de San Sabá. The mission was part of the Spanish effort to deal with the Lipan Apaches. Only ten months after its founding, the mission was attacked and burned by a large force of Native Americans, mostly Comanches.

Both historians and archeologists have long searched for the mission site. In 1993 a team of historians and archeologists, working together, at last succeeded. They found the general area by research in historic documents. As they searched for the exact site, they were lucky to come upon a recently plowed field. The plowing had turned up several artifacts, including a ceramic **olive jar** fragment dating from the Spanish Colonial period.

Test excavations at the site revealed many more types of artifacts. Sherds of **Majolica** (a

kind of pottery that is typical of Spanish Colonial sites) were found. Metal objects included wrought-iron nails, latches and hooks, hinges, horse gear, and musket balls.

San Sabá is famous not only as a mission site but as the site of a historic event. The battle at San Sabá was the first one between Spaniards and Native Americans in Texas in which the Native Americans used guns. The guns they used were **flintlock** weapons. This battle was also the first major conflict with the Comanches in Texas.

Early French Settlement (1685 to 1820)

French settlement in Texas was never very widespread. All of the settlements were located along the borders of the state: three along the Red River, two near the eastern border, and two on the Gulf Coast.

The beginning date of French settlement is set by the founding of **La Salle's Fort St. Louis** in 1685. The ending date is set by the abandonment of pirate **Jean Lafitte's** Galveston Island community in 1820.

In the late 18th and early 19th centuries, Indian villages along the Red River were supplied by French traders. Archeological investigation of these sites has added to our understanding of the early French presence in Texas. Study of these sites also has helped us understand when contact with Europeans began to alter forever the lives of Native Americans.

Besides these trading sites, the best known French settlement site in Texas is **Nacogdoches** in East Texas, founded in 1721.

The most important French settlements in the southern United States lie to the east of Texas, in Louisiana. However, the French presence in Texas led the Spanish to become more active in this frontier area. They established missions, presidios, and settlements to prevent the French from taking over. So, today Texas has a unique Hispanic heritage—with just a hint of Cajun spice along our eastern border.

La Salle, Fort St. Louis, and the *Belle*

In 1685 Robert Cavalier, Sieur de La Salle, sailed from France in search of the mouth of the Mississippi River. His ships arrived, instead, in what is now Matagorda Bay on the coast of Texas. One of his original four ships had been captured by pirates, one was shipwrecked, and a third was sent back to France. La Salle and 20 of his remaining 180 men moved inland to find a location for a colony. He founded Fort St. Louis near the coast in what is now Victoria County.

When La Salle returned to the coast, he learned that his fourth ship, the *Belle*, had been wrecked during a storm in the bay in 1686. Bad luck and mistakes continued, and La Salle's attempt to establish a colony failed. Most of the colonists died, and a Spanish expedition later burned the remains of the fort.

More than 300 years later, in 1995, Texas Historical Commission (THC) archeologists located the site of the Belle shipwreck. Evidence that the wreck was indeed that of the *Belle* was discovered in one of the first recovered artifacts—a 700-pound bronze cannon with identifying French markings.

Incredibly, in 1996, THC archeologists also verified the site of Fort St. Louis. The site had been studied by historians, but there was no final evidence that this was the fort site until the archeologists excavated a cache of cannons there. The cannons had been found and buried at the site by a Spanish expedition—and were described in Spanish accounts.

Texas as Republic and State (1836–to present)

When Texas became a republic, many new immigrants came from the United States and Europe. They joined the Mexican Texans, African Americans, and Anglo-Americans who were already living here.



Diagram of the excavation of La Salle's cannons at Fort St. Louis.

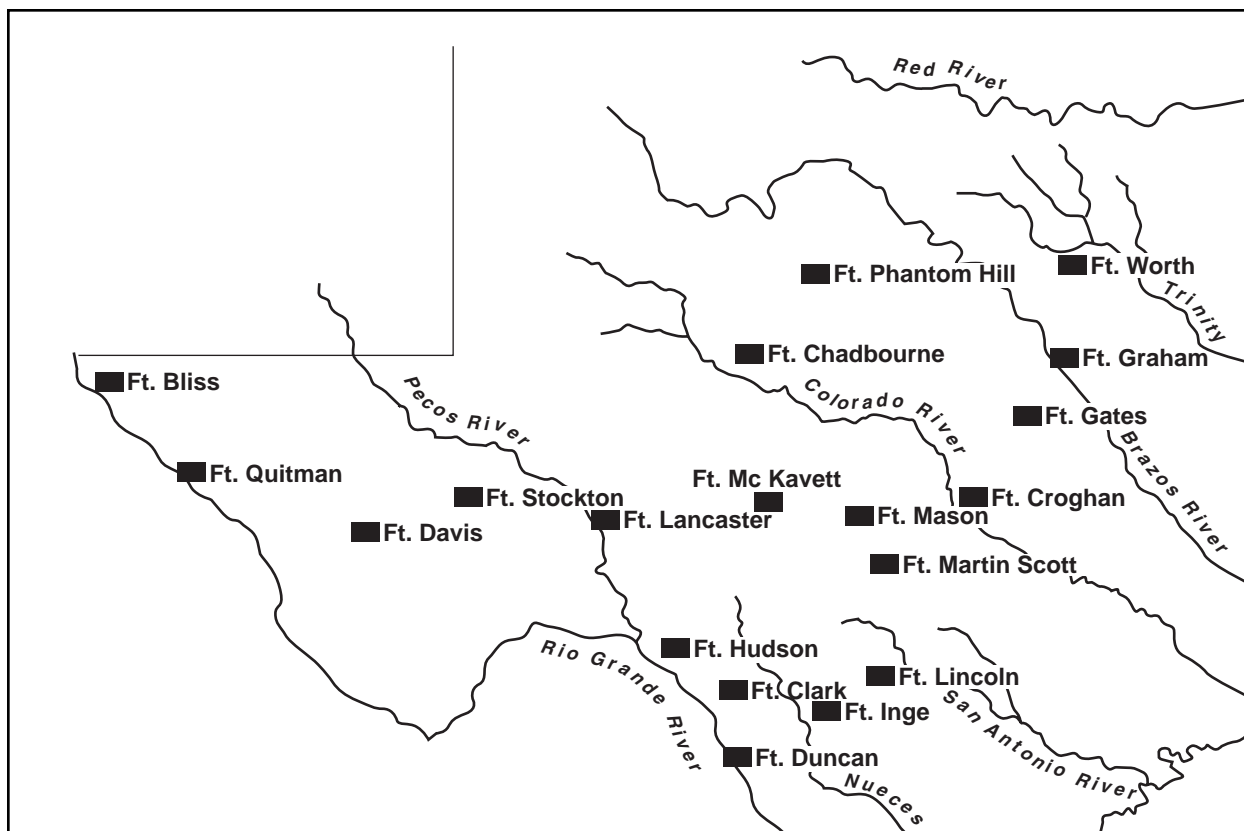
Native American groups who had originally lived in Texas had been unable to withstand the settlement of their territories. First the European and, later, the Anglo-Americans pushed the Indians out of Texas. By the 19th century, only the Comanches and their allies remained as a real threat to western settlement. In the early days the Comanche's allies were the Wichitas. Later the Comanches were joined by **Kiowas, Kiowa Apaches, Cheyennes, and Arapahoes**. Apache resistance continued only in far western Texas and New Mexico.

When Texas joined the United States, federal forts were established to assist in the eradication of these aggressive tribes who were dedicated to holding fast to their lands and their independence. In 1874 the U.S. military began a campaign to force the last of the Indian tribes that lived in Texas onto reservations in the "Indian Territory"

of Oklahoma. This military campaign was known as the Red River War because it took place near the headwaters of the Red River in the Texas Panhandle.

Several battles took place during this campaign in which the Indians were defeated. In 1875 the last of the Comanches, led by the famous chief Quanah Parker, surrendered to the military. With the end of the Red River War, the Indians' determined resistance had failed, and the way west was open to Anglo-American settlers.

Pioneer settlers moved westward and northward across the land from the early settlements in eastern Texas. They built dugouts, log cabins, and simple stone and adobe structures. Archeological investigation of their home sites has revealed many details of Texas history. Archeology has helped us understand the trade and communications routes that the settlers devel-



Early frontier forts in Texas, 1848–1860.

oped and has revealed in vivid detail the daily lives of pioneer families.

Sites of early industry in Texas include railroad camps, mines, sawmills, pottery kilns, brick works, iron works, and cow camps. These sites tell of the roadworkers, the cowboys, and the laborers who live on in our folklore and literature but have too often been neglected in formal histories.

Today people of all racial, ethnic, and religious backgrounds live in Texas. And they are all creating the historic and archeological sites of the future.

The Frontier Forts—Historical and Archeological Sites

Most of the frontier forts of Texas were established in the 1840s. Then, they were temporarily abandoned by the federal government during the Civil War. Most were rebuilt after the

war, but even these were active military installations for only half a century. A very few survived into the 20th century, and these survived with few of their original structures intact.

The **Texas Centennial**—the 100th anniversary of the Texas Revolution—was celebrated in 1936. Planning for this event inspired Texans to begin preserving the unique places and structures of the past. Some work was done to restore or protect the most famous frontier forts.

However, major work was not begun on most of the old forts until the 1960s. This work was inspired by new state and federal preservation laws. Archeology has played an important role in the restoration and protection of the forts. Artifacts recovered during excavations are now on display in many of these historic places. A list of historic forts that are open to the public is given in an Appendix at the end of this "Historic Texas" section.

A Frontier Fort inside a City

Fort Concho (1867–1889) is located within the City of San Angelo in Tom Green County. It is one of the best-preserved frontier forts in Texas, consisting of more than 20 reconstructed and restored buildings. The fort was established in 1867 and operated until 1889.

Archeology has been very important here, especially in locating the foundations of original buildings. Some of the remains of the fort still lie beneath the city streets of San Angelo.

The restored barracks is one of the site's most popular exhibits. This and other exhibits depict the history of the fort, local settlement, and the last days of the frontier.

Archeology also is part of on-going educational activities sponsored by the Fort Concho Museum.

About ten reports of archeological investigations at the fort, and many historical studies, have been published. The archeological site number of Fort Concho is 41TG57.

A Hispanic Neighborhood as an Archeological Site

As the population of Texas grows, so does the size of our cities. As a city grows, many of its older neighborhoods may be destroyed to make way for modern developments. The study of "urban archeology" is becoming more and more important. **Laredo** is a good example because it is an old Texas city in an area that was settled in late Spanish times.

The improvement of Interstate Highway 35 and a new bridge where it crosses the Rio Grande at Laredo was planned in the 1970s. The project would have an impact on an old area of the city, so state and federal laws required that historians and archeologists study the area.

Archeologists began investigation of a four-block area in 1979, and their report was published in 1986. The site area was numbered 41WB19.

Excavations revealed clues to 120 years of occupation of this Mexican Texan neighborhood.



African American soldiers, known as Buffalo soldiers, served at many of the frontier forts in Texas.

The archeologists found artifacts that were evidence of changes from Spanish times to the 1970s. To learn more about this site, the archeologists also studied written histories and interviewed people who had lived in the neighborhood.

The archeologists learned that in the time before the Civil War (1860) many houses were built of stone or **jacal** construction. A jacal was a small house built of upright sticks daubed with mud and having a thatched roof. The sticks were usually mesquite, since there were no large trees in south Texas. Houses of hand-quarried stone and jacals in south Texas date from as early as the 1790s, the period of Spanish colonization in this region.

After the Civil War the railroad came to Laredo, and from about 1888 to 1915 new brick

homes were built. Wooden houses of the **board-and-batten** type were associated with immigrants of the Mexican Revolution period.

The addition of electricity, plumbing, and paved streets marked the modern period of occupation.

Thousands of interesting artifacts were found. The artifacts helped the archeologists to understand the different periods of settlement and acculturation in this Laredo neighborhood.

Pioneer Cabins in LBJ Country

Lyndon B. Johnson, president of the United States from 1963 to 1969, is honored in Texas by both state and federal historic site parks. The state park is located in Gillespie County, near LBJ's birthplace. Besides honoring a famous Texan, the park also preserves a good selection of Texas history.

Historic frontier settlement left many important sites in the park area. German Texan homesteads of log and stone are found there. Also related to the period of German settlement are the remains of log barns, rock fences, vegetable and wine cellars, hand-dug wells, livestock corrals, well houses, smokehouses, a one-room schoolhouse, and a lime kiln.

Before the historic sites were restored, archeologists came in 1968 to record and study the archeological sites. The **Behrens, Danz, and Sauer homesites** were recorded. Small **test units** were excavated beneath and around the Behrens cabin, and a trash dump was explored. At the Sauer homesite test excavations revealed stone foundations of an earlier structure at the site. Deep test pits were dug in a trash-filled cellar, and many artifacts were recovered. The Danz place was carefully mapped and artifacts were recovered from the surface, but the site was left for later study.

Study of the structures and artifacts added many details to what we know about life in 19th-century German farmsteads. The archeological studies also helped in preservation of the historic sites. The Behrens Cabin has been restored and

furnished as it was in the late 19th century. The Sauer homesite has been restored and is operated as a "living history" farmstead. Both are open to park visitors.

The Seminole Negro Indian Scouts

The **Seminole Negro Indian Scouts** were members of a unique culture. Their ancestors were runaway black slaves who, in the early 1800s, joined with the Seminole Indians in Florida. The Seminole blacks were later forcibly removed with the Seminoles to a reservation in Oklahoma.

On the reservation, the Seminoles were located near their traditional enemies, the Creeks. In the 1850s, to escape troubles on the reservation many of the Seminoles went to Mexico. Some of the Seminole Indians later returned to the reservation, but the Seminole Negroes stayed. From there in 1870 they were recruited into Texas by the U.S. Army to serve as scouts. A small group went to **Fort Duncan** in 1870, and two years later another group went to **Fort Clark**.

Fort Clark, located near the town of Brackettville in Kinney County, was founded in 1852. Based at this fort, the Seminole Negro Indian Scouts served as U.S. military scouts from 1872 until 1914. Four of the scouts received the Medal of Honor, but all of the scouts were known as excellent trackers, hunters, and soldiers.

All that remains of their presence in Texas is a cemetery and the buried remains of their village near Fort Clark. The scouts, however, are not forgotten. Many descendants live in the village of **Nacimiento**, in northern Mexico, where most of the scouts moved with their families after being dismissed from service in 1914. They still hold reunions and visit the cemetery near Fort Clark, and six years ago they started a drive to keep their history alive.

Descendants are being helped by the Texas Historical Commission and the Institute of Texan Cultures to preserve the story of the famous



A formal portrait of a Seminole Negro Indian Scout.

scouts. Archeologists located the former village site, and interviewers are recording family histories. Both historic and recent photographs are being collected and preserved.

APPLYING YOUR KNOWLEDGE

There were several Spanish missions and forts in Texas.

- The Alamo was once a Spanish mission, and its name was Mission San Antonio de Valero. Why is the Alamo famous in Texas history?
- Name some other Spanish missions in Texas.

Frontier forts were also part of the Historic Indian period.

- What kinds of things would you expect to find in a frontier fort?

Some sites associated with different ethnic groups are discussed above. Name these groups.

- Name some other ethnic groups that are part of Texas today.



A HISTORICAL REMINDER

Every historic site is also an archeological site. So the next time you visit the Alamo, or the San Jacinto Battlefield, or Mission San José, a pioneer log cabin, or even a historic home in a small town, you are also visiting an archeological site.

Historic sites on public lands are protected by law. Those on private land are not. So, only you can protect many of the historic sites in Texas.

Please don't dig in sites, don't remove artifacts from sites, and *do* encourage others to follow your example.

Remember, *you* are:

The Guardian of the Past.

APPENDIX

Forts You Can Visit

Fort Belknap (1851–1876)

South of Newcastle, Young County.

Six original structures and one replica of this federal frontier fort are now part of a county park.

Fort Clark (1852–1946)

Near Brackettville, Kinney County.

Fort Clark is associated with both the Seminole Negro Indian Scouts and the Buffalo Soldiers. This fort did not close until after World War II. It is now a private museum, open to the public. Fort Clark's site number is 41KY21.

Fort Davis (1854–1891)

At town of Fort Davis, Jeff Davis County.

This federal frontier fort is now a restored National Historic Landmark, administered by the National Park Service. It is one of the best-restored forts in Texas. Fort Davis's archeological site number is 41JD128.

Fort Duncan (estab. 1849)

Near Eagle Pass, Maverick County.

Several buildings have survived at this federal frontier fort and have been restored as part of a municipal park and country club. Fort Duncan's site number is 41MV2.

Fort Griffin (1867–1881)

North of Albany, Shackelford County.

This federal frontier fort is now a state historic site park. Fort Griffin's archeological site number is 41SF4.

Fort Lancaster (1855–1861)

East of Sheffield, Crockett County.

This federal fort, which was not reestablished after the Civil War, is also an Indian Wars battle site. The restored ruins are now a state historic site park. Fort Lancaster's archeological site number is 41CX28.

Fort McKavett (1852–1883)

Southwest of Menard, Menard County.

This federal fort has been well restored and is now a state historic site park. Fort McKavett's archeological site number is 41MN2.

Fort Martin Scott (estab. 1848)

Near Fredericksburg, Gillespie County.

The post guardhouse (restored) still survives. The site is operated by the Fredericksburg Heritage Foundation. Fort Martin Scott's archeological site number 41GL52.

Fort Mason (1851–1869)

Near Mason, Mason County.

This federal frontier fort was abandoned and fell into ruins. The officers quarters have been reconstructed on the original foundations, and the fort is now open to the public. Fort Mason's site number is 41MS130.

Fort Parker (estab. 1834)

Near Groesbeck, Limestone County.

This private fort, first home of Cynthia Ann Parker, mother of Quanah Parker, was restored in 1936 and again in 1967. It is now a state park. Fort Parker's site number is 41LT8.

Fort Richardson (estab. 1866)

Near Jacksboro, Jack County.

Six buildings survive at this fort, which has been restored by the Texas Parks and Wildlife Department. Fort Richardson's archeological site number is 41JA2.

Fort Stockton (estab. 1858)

In city of Fort Stockton, Pecos County.

This federal fort guarded the San Antonio–El Paso road. Several original buildings, primarily of adobe construction, still stand in the historic part of the city of Fort Stockton. The fort's archeological site number is 41PC71.



GLOSSARY

You probably already know some of the words in this glossary. But some words may be used with other words to form phrases that have special meanings. Some words have many meanings, and the ones given here are only the ones used in this book. Pronunciations guides are included for all except simple words and abbreviations.



A.D.—the abbreviation of *anno domini*. In measuring time, this means years since the birth of Christ.

aborigines (ab-oh-RIJ-uh-neeZ)—the indigenous inhabitants of a country; the native peoples as contrasted with invading or colonizing peoples. In North America we usually use the terms Native Americans or American Indians, while in Australia the term Aborigines is used to indicate the original human inhabitants of the country.

acequia (uh-SAY-kee-uh)—an irrigation channel, or ditch. A system of acequias is associated with the Spanish Colonial missions in San Antonio.

adobe (uh-DOH-bee)—bricks made of mud mixed with straw and dried in the sun.

agate (AG-it)—a hard, fine-grained stone having several colors arranged in stripes or bands. Alibates agate, from the Texas Panhandle, is banded gray and purple; this agate was used in making stone tools during thousands of years of prehistory.

agave (uh-GAH-vee)—a group of related plants that have long spiny leaves, such as the century plant and the Spanish dagger.

agriculture (AG-ri-kuhl-cher)—farming, or the cultivation of food plants such as corn and beans.

Alabama (al-uh-BAM-uh) - **Coushattas** (koo-SHAH-tuhZ)—a group of Indians who came to East Texas in the early 1800s and who still live in the state today.

anthropology (an-throh-PAHL-uh-jee)—the study of human cultures.

Apaches (uh-PA-cheez)—Native Americans of the Contact and historic periods in Texas. The Apaches were a bison-hunting culture and were first met by Spaniards in the Texas Panhandle.

Arapahoes (uh-RAP-uh-hohZ)—a northern Plains group that joined with several southern Plains tribes in the 1860s; they became allies of the Comanches.

Archaic (ar-KAY-ik)—a long period of prehistory following the Paleoindian period. Archaic people lived mostly by hunting small game and gathering wild plant foods.

archeology (ar-kee-AHL-uh-jee)—the science of learning how past people lived by studying the remains they left behind in the places where they once lived or camped.

archeological (ar-kee-oh-LAHJ-uh-kuhl) **repository** (ree-POZ-i-toh-ree)—a place where archeological records and artifacts are stored for permanent curation. In Texas, the main archeological repository is the Texas Archeological Research Laboratory, which is a part of the University of Texas at Austin. See *also* curation.

archeological (ar-kee-oh-LAHJ-uh-kuhl) **site** (syT)—a place that contains artifacts or other cultural remains left by people who once lived in or used that place.

arrowpoint (EHR-oh-poynt)—a sharp stone tip, or projectile point, for use on an arrow that is to be shot from a bow.

artifact (ar-tuh-FAKT)—any object that was made by past people. For example, an arrowpoint or a clay pot.

association (uh-soh-see-AY-shun)—undisturbed artifacts or other remains that are found

together in a site are described by archeologists as being found in association. For example, a Paleoindian site may contain spear points in association with mammoth bones.

Atakapans (at-uh-KAP-uhnz)—a group of Indians who lived in the southeastern part of Texas and along the upper Texas coast at the time of European contact.

atlatl (AT-uhl-at-uhl)—a tool, usually made of wood, that was used as a spear thrower in much the same way that a sling shot is used in throwing rocks.

attribute (a-truh-BYOOT)—a characteristic of an object; for example, a stem is an attribute of some arrowpoint types. *See also* type.



B.C. —the abbreviation of "before Christ"; in measuring time, this means years before the birth of Christ.

B.C.E.—the abbreviation of "before the common era"; this means the same as B.C.

B.P.—the abbreviation of "before the present." In scientific radiocarbon dating, this means before a date set at 1950. When we say "ten years ago" we are also measuring time in years "before the present."

band—a small social group consisting of two or more nuclear families; a band is usually territorially based rather than being based in one permanent place, such as a village; many hunting and gathering groups lived in bands.

bedrock (BED-rahk)—the layer of solid rock that lies under the soil. If the soil has eroded away, the bedrock may be exposed on the surface.

Behrens (BEH-rinz) **homesite**—a German Texas farm site in the LBJ park.

Belle (bel)—one of La Salle's ships, the *Belle* was wrecked in Matagorda Bay and is now an internationally known archeological site.

bison (BY-suhn)—the correct name for the American animal usually called a buffalo.

bison (BY-suhn) **antiquus** (an-TIK-wuhs)—an extinct bison that was much larger than the modern bison.

board (bohrrd) and **batten** (BAT-uhn)—this is a type of construction for the outer walls of wooden houses; the walls are formed of wide, vertical boards with a narrow strip of lumber nailed over each place where the wider boards are joined.

botanist (BAHT-uhn-ist)—a scientist who studies plants.

breechclout (BREECH-klawth)—a brief garment worn draped about the hips of a person.

burned-rock (bernd rahk) **midden** (MID-uhn)—a heap of fire-blackened and fire-cracked rocks that were removed from a cooking pit and piled around the edges of the pit.



C.E.—the abbreviation of "common era"; this means the same as A.D.

Cabeza (kah-BAY-suh) **de** (day) **Vaca** (VAH-kuh)—the first Spaniard to travel in the interior of Texas.

Caddos (KAD-ohz)—a group of Indians who lived in settled villages in Northeast Texas during the Late Prehistoric period and into the historic period.

Castroville (KAS-troh-vil)—the name of one of many different styles of dart points made by people during the Archaic period.

catalogue (KAT-uh-lawg)—an artifact is catalogued when it has been given a number that tells exactly where in the site that artifact was found.

ceramics (ser-AM-iks)—any deliberately fired clay artifact, such as ceramic vessels.

Archeologists usually use this word, instead of *pottery*, as a category for fired-clay wares, because *ceramics* refers to all kinds of fired-clay artifacts, from prehistoric pots to modern porcelain, from fired-clay figurines to ceramic door knobs.

ceremonial (sehr-uh-MOHN-ee-uhl) **center** — a place where people gather to observe rituals and rites that are part of their spiritual beliefs.

chain mail—a kind of flexible armor made of interlocked rings of metal. Chain mail was worn by some of the early Spanish explorers in Texas.

chert—a type of hard, smooth stone that ranges in color from gray to pink and even purple. Chert was often used by prehistoric people for making arrowpoints, knives, and other stone tools.

Cheyennes (shy-ANZ)—a Plains Indian group that became allies of the Comanches and other Southern Plains Indians in the late 19th century.

Christianize (KRIS-chun-yz): to convince someone to adopt the Christian religion.

chronology (krahn-AHL-uh-jee)—an arrangement of events in the order in which they occurred.

Clovis (KLOH-vis)—the name of the oldest known projectile point found in Texas. Clovis points were made by Paleoindians about 11,500 years ago. The people who made these points are identified as the Clovis culture.

Coahuiltecans (Koh-uh-weel-TAY-kuhnz)—the name given to the many bands of Indians who were hunters and gatherers and who lived in south Texas and northern Mexico at the time of European contact.

Comanches (koh-MAN-cheez)—a group of Plains Indians who moved into Texas in about 1700. Today the headquarters of the Comanche tribe is in western Oklahoma.

comparative (kum-PEHR-uh-tiv) **analysis** (uh-NAL-i-sis)—to study one thing by comparing it to another similar or opposite thing. Comparative analysis is very important to the science of archeology.

Contact (KAHN-takt) **period** (PEER-ee-uhd)—the time from the arrival of the first

Europeans (about 1500) until the Spaniards began to build missions in the state (about 1700) is called the Contact period.

contour (KAHN-toor) **lines**—the curvy lines on a topographic map that are used to show elevations and relief. The interval between the lines is a set distance that measures vertical spacing. For example, if the contour interval is 10 meters and two contour lines appear very close together, the lines show that the land rises (or falls off) very steeply. If the contour lines are far apart, they show that the land goes up (or down) 10 meters over a long distance. That is why contour lines are few and far between on a topographic map of the plains—and very close on a map of the mountains.

contract (KAHN-trakt) **archeology**—archeology that is contracted by private firms or the government for projects that must conform to local, state, or federal laws.

Coushatta. See Alabama-Coushatta.

cultural (KUHL-cher-uhl) **remains** (re-MAYNS)—anything that was made or used by humans. Cultural remains include many things besides tools. Some examples are the burned rock in a hearth, the remains of an adobe wall, a pit where trash was buried, and paintings on the walls of caves.

crossbow —a special bow with a mechanical device that made it shoot with much greater force than a common bow.

culture (KUHL-cher)—a group of people who speak the same language and have the same customs and way of life from generation to generation. When archeologists find the same kinds of artifacts, made in the same styles, and evidence of the same type of lifeways (such as hunting and gathering) in sites that cover long periods of time, the people who made those artifacts are identified as a culture (such as the Folsom culture).

curation (kyoo-RAY-shun)—taking care of a special collection, such as a collection of artifacts.



Danz (danz) **homesite**—a German Texan farm site in the LBJ park.

diameter (dy-AM-uh-ter)—the length of a straight line through the center of an object; diameter is often used as a measurement for circular or ball-shaped objects.

domesticate (duh-MES-tuh-kayt)—the act or process through which people cultivate or raise plants and animals for use by people.



Edwards chert (ED-werdz chert)—a Central Texas stone prized for making projectile points and other stone tools.

Elephas (EL-uh-fuhs) **columbi** (kuh-LUHM-by)—an extinct member of the elephant family. Mammoths are one example of extinct elephants.

ethnohistory (eth-noh-HIS-tuh-ree)—the study of the development of past cultures. Ethnohistorians study documentary sources to learn more about past peoples and how they lived.

excavate (eks-kuh-VAYT)—in archeology, to excavate means to investigate a site through a careful, scientific digging process.

excavation (eks-kuh-VAY-shun) **unit**. The mapped and measured square in which excavation is done.



flint—this name is often applied to any hard, fine-grained stone, such as chert or agate, used for making arrowpoints and similar tools. See also agate; chert.

flintlock—a gun or pistol used in the 17th and 18th centuries; a piece of flint, for striking a spark, was used in the firing works of these weapons. The small squares of flint are often found in French and Spanish Colonial sites.

Folsom (FOHL-suhm)—the name of the style of Paleoindian spear or dart point that was made after the Clovis point. Folsom points were made by Paleoindians of the Folsom culture.

Fort Clark—located near the town of Brackettville in Kinney County, this frontier fort was founded in 1852; the Seminole Negro Indian Scouts village was located near this fort.

Fort Concho (KAHN-choh)—a federal frontier fort in Tom Green County that was established in 1867 and operated until 1889.

Fort Duncan (DUHN-kuhn)—located in Maverick County, this frontier fort was established in 1849; Seminole Negro Indian Scouts served here.

Fort St. Louis. See La Salle.

Fresno (FREZ-noh)—the name of one of the many styles of arrowpoints made by Late Prehistoric people in Texas.



genetics (jin-E-tiks)—the study of genes, a special material in human and animal cells. Genes determine our physical appearance.

geographic (jee-oh-GRAF-ik) **coordinates** (koh-OR-di-nuhts)—points on a map that can be used to provide location; the system of latitude and longitude can be used as coordinates on a topographic map to mark the location of an archeological site.

geologist (jee-AHL-uh-jist)—a scientist who studies the history of the earth and its landforms, such as mountains, canyons, and plains.

Great Plains—a geographical region of high, level land that extends from Canada to Texas, in the center of North America. Except for wooded river valleys, the plains are mostly grasslands.

grid—in archeology, a grid is a system of squares, made of string attached to stakes, placed over a site. The grid lets the archeologist record

areal location in the site during excavation. One point in the grid is a permanent datum point (usually a piece of steel rod) that is left buried at the site. A future archeologist can use that datum point to establish exactly the same grid over the site.



hearth (harth)—any place where pits, stones, or burned soil remain in place to show where people once built a fire.

Historic (his-TOHR-ik) **period**—archeologists call the time after European contact in North America the Historic period.

historic preservation—a term once associated only with restoring and protecting old buildings or structures of the historic period, but now used by people in heritage-related fields to include all types of cultural resources, including archeological sites (both prehistoric and historic).



in situ (in SI-too)—when an artifact is found in place in an archeological site, archeologists say the artifact was found *in situ*. If a site has been disturbed, the artifacts in the site may no longer be in situ.

irrigate (EER-uh-gayt)—to supply water to land or crops by artificial means, such as digging canals from a river. Farmers who irrigate their crops do not have to depend on rainfall.



jacal (hah-KAHL)—a small house built of upright sticks daubed with mud and having a thatched roof.

Jumanos (hoo-MAH-nohz)—a bison-hunting people who lived in the Trans-Pecos region and adjoining areas of Texas at the time of European contact.



Karankawas (kuh-RAHN-kuh-wuhz)—a group of hunting and gathering Indians who were living along the Gulf coast in southern Texas at the time of European contact.

Kickapoos (KIK-uh-pooz)—an Indian group that moved down from the northern United States and into Mexico, and then moved into Texas after Texas became a state. Kickapoos still live along the border near Eagle Pass, Texas.

key. See map key.

Kiowas (KY-uh-wuhz)—a Plains Indian group that made peace with the Comanches and became their allies in the late 18th century. Their historic range extended into the Texas Panhandle.

Kiowa-Apaches—an Indian group culturally related to the Lipan Apaches; they joined the Plains Indian group known as the Kiowa and entered Texas in the late 18th century. The Kiowa and the Kiowa-Apaches became allies of the Comanches, and their historic range extended into the Texas Panhandle.

kill site—an archeological site that contains the remains of animals and the tools that prehistoric peoples used in killing those animals.



Lafitte (lah-FEET)—a Frenchman and a famous pirate, Jean Lafitte built a fortified house on Galveston Island in the early 19th century, when Galveston was still part of Spanish Texas; this compound was called Maison Rouge.

Laredo (luh-RAY-doh)—a city on the Texas-Mexico border that dates from the late Spanish Colonial period.

La Salle (lah SAHL)—the early French explorer who established an early settlement, called Fort St. Louis, near the Texas coast. His name was Robert Cavalier, and his title was Sieur de La Salle.

Late Prehistoric (pree-his-TOHR-ik)—the last period of prehistory in Texas. The Late Prehistoric period began when people began to use the bow and arrow, make pottery, and practice agriculture. This period ended when Europeans came to Texas and the Historic period began.

lifeways (LYF-wayz)—the pattern of living that a cultural group follows. Lifeways include the things that people do in order to get food and to use other natural resources. For example, moving about from place to place in search of wild plant foods is part of a lifeways pattern.

Lipan (li-PAHN) **Apaches** (uh-PACH-eez)—the group of Apaches known as the Lipan were bison hunters in the Texas Panhandle at the time of European contact. A few Lipan now live in New Mexico.

loincloth (LOYN-clawth). See breechclouts.



majolica (muh-HOH-li-kah)—a pottery made by the Spanish; early majolica is often blue and white, but other colors also were used; tin was used in the glaze, and majolica looks very different from Native American pottery.

mano (MAH-noh)—a rough stone (such as an oval piece of sandstone) that is held in the hand and used to grind seeds or other foods against a grinding stone (metate).

map key—the part of a map (usually inset, in a box, or printed in the margins) that gives the meanings of any symbols or abbreviations that are used in the map.

material (muh-TEER-ee-uhl) **culture** (KUHL-cher)—the structures, tools, and other artifacts that are the material remains of past peoples.

material (muh-TEER-ee-uhl) **remains** (ree-MAYNZ)—any remains of a past culture, including items made or used by the people who once occupied an archeological site. For

example, stone tools, pottery sherds, and fire-cracked rock from a hearth are material remains.

metate (muh-TAH-tee)—a slab of rough stone (such as sandstone) used with a mano (hand-held grinding stone) to grind seeds and other foods.

midden (MID-uhn)—any place where past people heaped trash, food remains, or other discarded items. Shell middens are common along the coast, and burned-rock middens are common in central Texas.

mission (MISH-uhn)—a Spanish Colonial settlement for Christianizing the Indians of a region; the settlement included a mission church and Indian quarters.

Montell (MAHN-tel)—the name of one of many different styles of dart points made by people during the Archaic period.



Nacimiento (nah-see-mee-EN-toh)—a village in northern Mexico that was settled by the Seminole Negro Indian Scouts. Their descendants still live there.

Nacogdoches (na-kuh-DO-chis)—French trade with the Indians of this locale in the early 18th century led the Spanish to establish missions here, to keep the French out of Texas; the settlement that grew around the missions played an important role in early Texas history.

natural forces—any force not controlled or directed by people. Natural forces include wind and rain, which can disturb an archeological site and eventually erode it completely away.

nomadic (NOH-mad-ik)—a word, derived from nomads, describing people who move about from place to place (usually within a defined territory) in search of food instead of building permanent shelters and settling in villages.

non-renewable (NAHN-ree-NYOO-uh-buhl)—something that cannot be duplicated or

replaced is nonrenewable. Archeological sites are nonrenewable cultural resources.

north arrow—an arrow-shaped pointer on a map that shows the direction of magnetic north (magnetic north is the direction as it would appear on a compass).



ocher (OH-ker)—a type of iron ore (usually red or yellow in color) that is commonly used as a natural pigment, or paint color; red ocher was used to make the red paint used in most rock art sites in Texas.

olive jar—a heavy ceramic vessel used for shipping olive oil; sherds of olive jars are often found in Spanish Colonial sites.

oral (OHR-uhl) **tradition** (truh-DISH-uhn)—knowledge that is passed from one person to another and one generation to another by the spoken word. Cultures that have no written language must depend on their oral tradition to preserve the history and myths of their people.



Paleoindian (pay-lee-oh-IN-dee-uhn)—the earliest known human inhabitants of North America, including prehistoric Texas.

paleontologist (pay-lee-uhn-TAHL-uh-jist)—a scientist who studies the history and lifeways of extinct animals through the fossilized remains of animal bones.

Pedernales (ped-er-NAH-les)—the name of one of many different styles of dart points made by people during the Archaic period.

pemican (PIM-uh-kuhn)—meat dried and ground with nuts or berries.

Perdiz (per-DEEZ poynt)—the name of one of the many styles of arrowpoints made by Late Prehistoric people in Texas.

perishable (PEIR-ish-uh-buhl) **artifact** (AR-tuh-fakt)—an artifact made of wood, plant fiber,

or some other material that will not last long after the item is discarded.

petroglyph (PET-roh-glif)—a type of rock art created by engraving, or incising, the design on on a natural rock face.

pictograph (PIK-toh-graf)—a type of rock art created by painting the design on a rock face.

Plains Indians—the term applied to Indian cultures of the High Plains who lived mostly by hunting bison. Comanches and Apaches are Plains Indians.

Plainview (PLAYN-vyoo)—the name of a late Paleoindian spear point. Plainview points were made by Paleoindians of the Plainview culture.

pothunter—a person who digs in archeological sites and collects archeological objects for fun or profit.

pottery—any vessel, such as a bowl or jug, made of moist clay and then hardened by firing. The kind of pottery made by Native Americans is called coarse earthenware because it was fired over an open fire and is not as hard as pottery fired in a kiln. A pottery kiln is a special kind of oven with a very hot fire.

pottery sherd—a piece, or fragment, of a pottery vessel. More sherds than whole vessels are found in most archeological sites.

prehistory (pree-HIS-tohr-ee)—the time before written history; in Texas the prehistoric period ends with the arrival of the first Spanish explorers in the 16th century.

presidio (pruh-SID-ee-oh)—the Spanish word for fort; the surviving Spanish forts in Texas are still called presidios.

projectile (proh-JEK-tuhl) **point** (poynt)—a sharp tip for a spear, dart, or arrow. Prehistoric people made their projectile points of stone.

provenience (proh-VEEN-ee-uhns)—the location of material remains in an archeological site according to their horizontal and/or vertical position in relation to a set of spatial coordinates. Spatial coordinates include grid square, unit number, and level. Location data

is supplemented by supplemental notes and photographs. For example, significant remains are usually photographed in situ.

pueblo (PWAY-bloh)—an Indian village with closely clustered, apartment-like houses usually made of adobe brick or stone. The best-known builders of prehistoric pueblos are the Indians of New Mexico and Arizona.



quarry (KWAR-ee) **site**—a place where prehistoric people dug or collected stone for making stone tools.



random (ran-DUHM) **sample**—a selection of items that has no regular plan or pattern; for example, an archeologist may decide to do a detailed study of only a random sample of 100 flakes from a large collection of flint flakes. A simple way to get this random sample is to number all of the items, write the numbers on slips of paper, shake up the slips in a container, and then draw out 100 slips; today, computers can select a random sample from a list of item numbers.

redoubt (REE-dowt)—a small, usually temporary defensive work, especially one used to defend a hill or pass.

repository (ree-PAHZ-uh-tohr-ee)—a special place, like a museum, where artifacts can be properly curated. *See also* curation.

rockshelter (RAHK-shel-ter)—a natural recess in a stone canyon wall or a shelter formed by fallen boulders. Some prehistoric peoples lived in rockshelters.



Salvage (SAL-vij) **archeology**—excavations carried out to save as much of a site as possible in a short period of time.

Sauer (sour) **homesite**—a German Texan farm site in the LBJ park.

scale—a statement of the relationship between actual measurement and the distance shown in a map, chart, plan, or photograph. For example, if the scale of a map is "1 cm = 1 km," then 1 centimeter on the map is equal to 1 kilometer of actual distance.

Scallorn (SKAL-ern)—the name of one of the many styles of arrowpoints made by Late Prehistoric people in Texas.

sedentary (SED-uhn-ter-ee)—archeologists say that people were sedentary if they lived in one place and grew their own food, rather than moving about from place to place in search of wild foods.

Seminole (SIM-uh-nohl) **Negro Indian**

Scouts—the Seminole Negroes were associated with the Seminole Indians in Florida, Oklahoma, and Mexico. Members of this unique culture served as U.S. military scouts in Texas in the late 19th and early 20th century.

shaman (SHAY-muhn)—a priest or ceremonial leader who uses magic to cure the sick, foretell events, and communicate with the spirit world.

shell (shel) **midden** (MID-uhn)—a place where mussels, clams, or oysters were collected and eaten, and the shells discarded by people. Most shell middens were formed in places where people returned season after season, year after year, to camp in the same places along the coast.

sherd. *See* pottery sherd.

Sioux (soo)—the Sioux, like the Comanches, were Plains Indians. The Sioux lived farther north on the plains, not in Texas.

site. *See* archeological site.

site form—also sometimes called "site survey form" or "site data form"; these terms refer to the forms that archeologists fill out when they record a site. When the form has been completed, a permanent site number is

assigned and the form is placed in an archeological repository.

site map—a map prepared by an archeologist to show the locations of features and excavations units in an archeological site.

social center—any place where people meet in groups to act as a government, to perform ceremonies, or to carry out other activities.

sotol (SOH-tohl)—a desert plant of Mexico and the Southwestern United States. The sotol plant has slender, pointed leaves. When the sotol blooms, a stalk rises up from the center of the cluster of leaves, much like the stalk of a century plant.

Spanish (SPAN-ish) **Colonial** (kuh-LOHN-ee-uhl) **period**—part of the Historic period, after about 1700 until the end of Spanish rule in Texas (about 1800).

specialize (SPESH-uhl-yze)—to develop a special skill. In prehistory, people who were hunters and gatherers usually did not have the need to develop special skills. For example, some hunters and gatherers did not use pottery, and others used only a few simple pots. When people settled in agricultural villages and their groups or bands contained more members, they had the time and the need to become specialists, such as tool makers, pottery makers, weavers, or religious leaders.

special sample—any sample of remains from an archeological site taken for special scientific tests. For example, a carbon sample can be used for radiocarbon dating, and a pollen sample can be used to identify plants.

stem—beginning in Archaic times, some projectile points were made with stems at their bases, where the points were attached to shafts for use as darts or arrows.

strata (STRA-tuh)—layers of soil in an archeological site, each layer being different in texture and color from the soil above or below it. Cultural remains and natural sediments become buried over time; the layer on the bottom is the oldest, the layer on top is the youngest. Strata may be formed by natural

forces (such as erosion) or by human activities (such as discarding ashes and fire-cracked rock from fires).

stratigraphy (struh-TIG-ruh-fee). See strata.

symbolic (sim-BAHL-ik)—not having a literal meaning, or having a meaning other than the obvious literal meaning. For example, a spur (like those used by cowboys) can be used to symbolize, or stand for, a basketball team.



test unit—a small excavation for determining the significance of an archeological site. See also excavation unit.

Texas Centennial (sin-TIN-ee-uhl)—the 100th anniversary of the Texas Revolution, when Texas became a republic.

Tigua (TEE-gwuh)—a group of puebloan Indians from New Mexico who moved to a Spanish mission in El Paso in the late 1600s. The Tigua still live in El Paso, in a pueblo called Ysleta.

timeline—a visual representation of events in chronological order.

Tonkawas (TAHN-kuh-wuhz)—a group of bison-hunting Indians who lived in central Texas during the Historic period. A few Tonkawas now live in Oklahoma.

topographic (toh-poh-GRAF-ik) **map**—a map that accurately depicts the physical features and relief of an area. Relief—or how hilly or flat the land is—is shown on the map by contour lines. See also contour lines.

trade beads—glass beads made in Europe and traded to the American Indians of the Historic period.

travois (TRAV-wah)—poles rigged as a sort of sled, usually with a cover made of animal hides, to be pulled behind a dog or horse.

turquoise (TER-kwoyz)—a bluish green gemstone, usually from New Mexico or Arizona. Beads of turquoise were important prehistoric trade items and have been found in many archeological sites in Texas.

type—in archeology, a characteristic is called an attribute, and a set of objects with similar attributes is called a type. For example, arrowpoints that have a set of similar attributes may be defined as a type and given a name, such as Perdiz point.



unit. See excavation unit. See *also* grid.



Wichitas (WICH-i-tahs)—a group of Indians living in north-central Texas during the early Historic period. The Wichita tribal group now lives in Oklahoma.